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MANAGEMENT AUDIT  
of the

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BUILDING AND SAFETY

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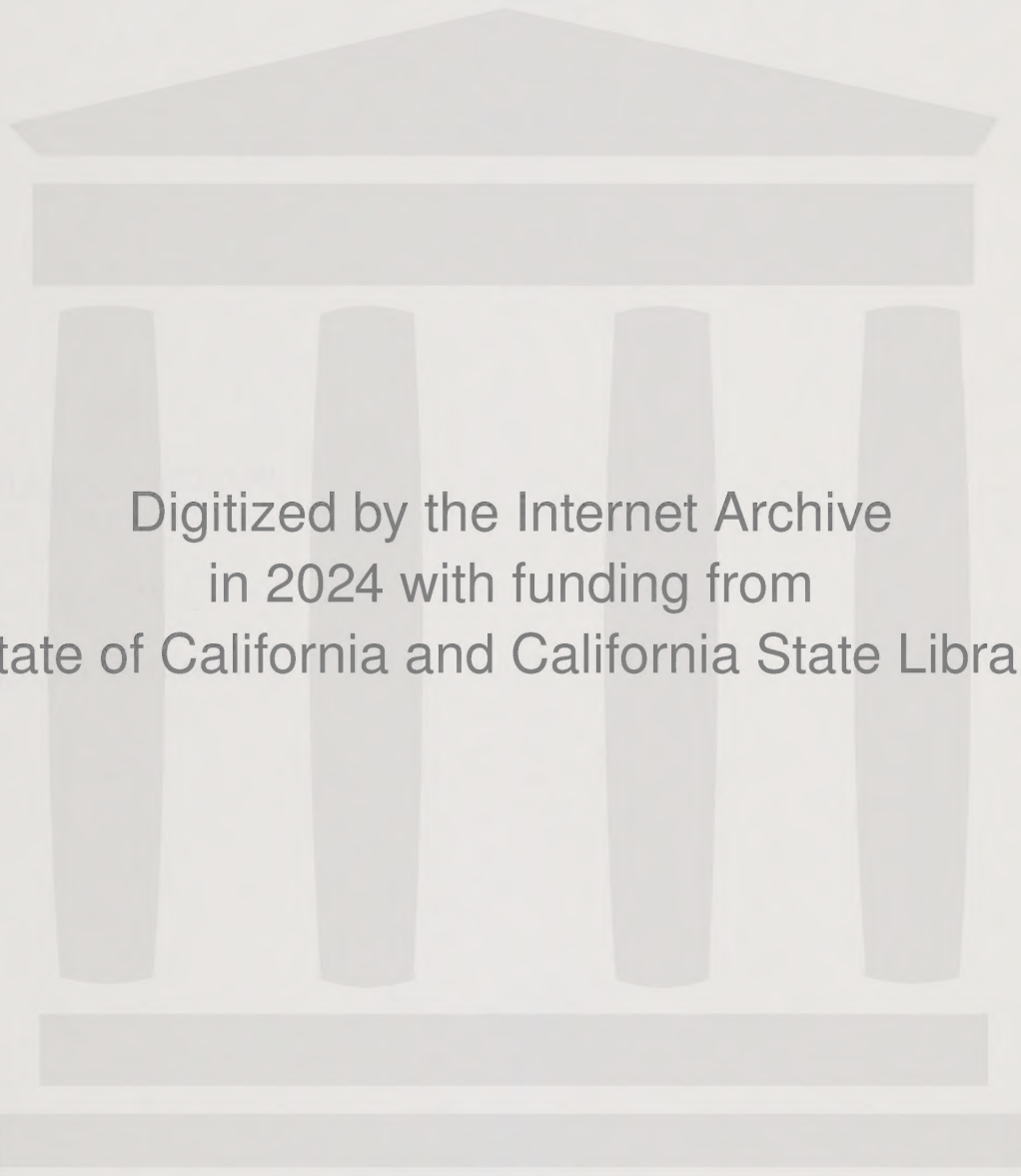
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LA. Dept. of bldg + safety.  
Building laws. -- CA -- LA

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City Administrative Officer

Los Angeles,

January, 1979



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## INTRODUCTION

### Audit Methods

This document presents the findings and recommendations of the third Audit of the Building and Safety Department. Prior Audits took place in 1967 and 1973. In addition, in 1965 an Audit of supervisory control practices was conducted. Rather than focusing on organizational units within the Department as in prior Audits, the Audit Team concentrated on the major functional areas of engineering, inspection, conservation and support services functions, cutting across organizational lines in order to evaluate operations and to determine whether the Department is optimally organized to attain its objectives.

### Department Functions

The Department of Building and Safety enforces the ordinances and laws relating to new construction, changes made to existing structures, and the installation, alterations, use and operation of heating, plumbing, lighting, ventilating, refrigerating, electrical and mechanical appliances and equipment. The Department enforces the Zoning laws of the City; provides a preventive as well as a corrective program for the rehabilitation of substandard structures; provides a program for inspection of all excavations and fills on private property; enforces the swimming pool fencing ordinance, tests and approves electrical and plumbing appliances and equipment for sale in the City; inspects boilers and elevators; and implements the City's program for the removal of abandoned vehicles from private property.

### Department Organization

The Department is headed by a General Manager, known as the Superintendent of Building. The Board of Building and Safety Commissioners acts in an advisory capacity and in addition may hear and determine appeals from decisions of the Superintendent of Building on requests for slight modifications in the provisions of the City's Zoning and Building Ordinances. The Department's services are provided through its City Hall Office and through district and branch offices in West Los Angeles, San Pedro, Van Nuys, and Sunland-Tujunga. As shown in the accompanying organization chart, the Department is divided into five major bureaus. With a total budget of \$15,273,774 in 1977-78, and an adjusted 1978-79 budget of \$17,227,587 it





operates the following programs with 808 regular employees:

Program	<u>Authorized Regular Positions</u>	<u>Budget</u>
Engineering plan checking .....	120	\$ 2,694,575
New construction inspection .....	261	5,153,720
Licensing, testing and material control .....	69	884,139
Conservation of existing structures and mechanical devices .....	204	3,731,843
Technical support .....	45	936,472
General adminis- tration and support .....	109	1,873,025
	<u>808</u>	<u>\$ 15,273,774</u>



## SUMMARY

The Department of Building and Safety is organized along traditional craft and engineering lines and, within the constraints imposed by this form of organization, is operating in a reasonably effective manner. However, the effectiveness and efficiency of the Department could be increased significantly under the alternative organization and policies recommended in this Audit Report.

A significant effect of the current organization is termed "compartmentation" in the Report. This effect is manifested in the overall impression that the Department is a collection of isolated bureaus operating with little overall managerial guidance or coordination. Under the current organization the general manager and executive officer are virtually the only employees in the Department without bureau identification. All Bureaus act essentially independently of each other, maintain their own procedures, training programs, public counters and objectives. Improvements in processing methods used by one bureau are not transmitted to other bureaus. Problems solved in one bureau must, if they occur in another bureau, be solved from scratch once again. In order to remedy this problem, it is recommended that a central staff group reporting to the general manager be established within existing resources to deal with Department-wide problems. In addition a functional organization is recommended to centralize inspection and engineering activities.

Inspection activity is conducted by the Building, Mechanical, Conservation, and Engineering Research and Development Bureaus. This activity is further subdivided into inspection of one-and-two family dwelling units; such general and commercial structures as apartments, stores, shops, and industrial/manufacturing buildings; high rise structures, residential and commercial complaints and materials. Some of these subdivisions are further divided into geographical offices and into specialized operations like electrical, plumbing, heating/air conditioning, structural, elevator and pressure vessel inspections and investigations.

This audit has determined that the inspection activity does not operate with sufficient centralized control; is not flexible enough to respond to fluctuating workloads (both quantity and type of construction work to be inspected); and, because of overlapping geographical assignments, unable to identify "non-permitted" or bootlegged construction work without having first received a complaint. These situations result from





inspection work being divided among four bureaus with different inspection policies, standards, philosophies, interpretations, workloads, supervisory ratios, and priorities. Attempts to alleviate these problems through improved intradepartment coordination have not corrected their basic cause. Essentially the same work is being conducted and supervised in different bureaus in different ways. The best and longest lasting solution is to create a single inspection bureau. Concurrent with the development of this organization: (1) the inspection responsibilities of Building Mechanical Inspectors should be increased to include all woodframe and less complex metal and masonry construction; and (2) the City should be divided into geographic areas with the inspection and complaint workload in each district assigned to one inspector who would also be responsible for the identification of "non-permitted" work.

The proposed expansion of the role of combined (building-mechanical) inspections to cover similar types of structures, regardless of whether the occupancy is residential or commercial, should result in increased effectiveness at the same or lower cost. Complaints of code violations, both residential and commercial, have been increasing and have resulted in large backlogs. It is proposed to make a building mechanical inspector responsible for both construction inspection and complaint referrals within a geographic area of the City. This responsibility would not include specialized inspections such as grading or high rise structures. In combination with other recommendations, this change will greatly expedite construction inspections and complaint investigations, reduce non-productive time consumed while driving and create an inspection pool capable of inspecting a broad range of structures.

The Department has been substantially insulated from the effects of Proposition 13 by the fact that its services are largely supported by fees. Such services nevertheless represent a cost of government, and analysis during the audit resulted in a number of recommendations which would reduce costs while maintaining quality and quantity of service. The elimination of the Engineering Research and Development Bureau is feasible in that all of its functions could be performed equally well elsewhere. One less Bureau also will have a favorable impact on the compartmentation problem noted above.

Supervisory ratios are one-to-one in some instances. This is an anachronism which must be corrected, as is the assignment of a high level engineering position to serve as secretary to the Commission and Housing Advisory and Appeals Board. This assignment appears to date from the time when the Commission was head of the department.





The Department's records systems have improved significantly since the prior audit, although some additional improvements are recommended. Information systems are a major and correctly perceived need according to Department management. However, the focus seems to have been on automated systems. Due to decreased availability of funds for new computer systems, an automated Building and Safety system is, at best, a remote possibility. Accordingly, the recommendations focus upon non-automated improvements, especially in the area of workload control. Coupled with the consolidation of inspection activities, these non-automated systems are more conceivable.

The problem of compartmentation surfaced very visibly in the training function, where there are several programs rather than a single departmental approach.

Departmental fees, while determined to be adequate overall, should be adjusted to reflect more directly the work performed by the Department rather than the valuation of the structure. The Department has been studying alternatives which would meet the intent of this recommendation. A key feature recommended to be included is some form of penalty for poor quality plans or construction work which requires excessive plan checking or inspection effort.

The Department is moving closer to adopting provisions of the Uniform Building Code. A closer correspondence of City and Uniform Codes will be beneficial to all parties in the construction process. However, certain areas, such as grading, may never totally correspond to the uniform code due to particular problems in Los Angeles. The Code provisions for grading, as well as procedures, were addressed separately by the Storm Damage Task Force and are not addressed in this Audit.

The recommendations of this report, when implemented, have the potential of increasing the effectiveness of the Building and Safety Department at a reduction in cost. It was observed in the course of the audit that the present organization frequently did not permit best use of the knowledge, skills, and dedication present in the Department.

On December 7, 1978, the Department was given a draft of this Report for review. Their comments, dated January 23, 1979, are attached as an appendix. It should be noted that we do not agree with many of the Department's statements and are particularly concerned with their misunderstanding of the Audit process and the implication that recommendations should be negotiated.



## RECOMMENDATIONS

### POLICY

That the Superintendent of Building:

1. Functionally reorganize the Department by incorporating the following changes:
  - a. Eliminate the Engineering Research and Development Bureau, and reassign all of its functions to other Bureaus.
  - b. Establish, within existing resources, an Operations Improvement and Control Group reporting to the Executive Officer the duties of which will include inter-bureau coordination, development of information systems (records) and analysis of operating problems.
  - c. Establish an Inspection Bureau to perform such activities as building, building-mechanical, electrical, plumbing, heating, refrigeration, elevator, pressure vessel inspection; residential and commercial complaint investigation; investigation work now performed in the Investigation Division; all technical training for inspectors in the Department; and material control.
  - d. Revise the functions of the Conservation Bureau to include all current responsibilities except complaint investigation.
  - e. Establish an Engineering Bureau to provide structural engineering plan check, grading and geology engineering and inspection, electrical and mechanical testing of appliances, electrical and mechanical plan check.
2.
  - a. Develop a plan for the issuance of citations and fines to be levied against violators of Electrical Code provisions who disregard the Department's initial notice to comply.
  - b. Explore the feasibility of issuing citations to property owners who fail to comply with Conservation Bureau notices.
3. Develop and recommend to the Mayor and Council a revised fee structure for both plan checks and building permits which relates more closely to Department effort to perform this





work. Said revised structure should include monetary or completion priority penalties for incomplete or poor quality plans which require excessive plan checking effort or poor quality construction work requiring excessive inspection effort.

4. In cooperation with the Fire Commission and the Chief Engineer and General Manager of the Fire Department, revise procedures to minimize duplication of both Plan Check and Inspection effort.
5.
  - a. Develop objectives and procedures for the "One Stop Permit Information Center", by implementing the concept of an interdepartmental study group contained in the 1978-79 Budget.
  - b. Meet with the Board of Public Works to establish common boundaries between their district offices wherever practicable.
6. In cooperation with the General Manager of the Community Development Department, study the feasibility of transferring the Hardship Emergency Loan Program (HELP) from the Building and Safety Department to the Community Development Department.

#### ADMINISTRATIVE

7. Improve the effectiveness and efficiency of plan checking in City Hall to the same level as Branch Offices.
8. Meet with the Director of Planning and the City Engineer to review the processing of geologic reports for tentative tract maps and prepare a report to the Mayor with recommendations for expediting such processing.
9. Review the geographic location of employees in order to maximize efficiency by having assignments nearer to the source of workload. Specifically:
  - a. Assign one position of Engineering Geologist and one clerical position to the Van Nuys Office to establish a Soils Engineering and Geology Section to expedite the review and preparation of geology studies of proposed development in the San Fernando Valley.
  - b. Assign Conservation Bureau Inspectors to the Valley Office, reporting directly to Conservation Bureau Management.



10. Revise the methods of performing inspections in the following manner:

- a. Divide the City into "inspection areas" and assign responsibility to a Building Mechanical Inspector within each geographic area for construction inspections (both residential and general/commercial structures) complaint referrals except for specific types of inspections such as grading, large tracts, or major structures.
- b. Assign additional inspection responsibilities to Building Mechanical Inspectors based on type of material used to build a structure (i.e. wood-frame, masonry, metal) rather than type of occupancy (single-family, duplex) so that a BMI would inspect all structures constructed of wood, masonry, or metal for residential single and multiple family and general industrial-commercial uses.
- c. Insure that inspectors are provided with adequate support such as calculators, reference material and code books, equipment catalogues, etc., necessary to perform their tasks.
- d. Implement a pilot program for the field use of dictating equipment (in place of handwriting standard forms) to determine costs, benefits, and staffing ratios (inspectors to clerk typists), acceptability, etc.
- e. Subject to the constraints of the meet and confer process; (i) adjust the working hours of field personnel to be more available to homeowners for Conservation Bureau cases and (ii) to more closely conform to days and hours worked by the construction industry.
- f. Eliminate the practice of "one on one" supervision currently used in the Mechanical Bureau.
- g. Request reclassification of various specialty inspectors and supervisors to the Building Mechanical Inspector series consistent with Recommendations 10a and 10b; establish supervisory employee ratios that are consistent with workloads, employee experience, and operating conditions.





11. Revise the procedure of referring cases to the Investigation Division from the various Bureaus such that:
  - a. Only cases of a specific level of difficulty or enforcement potential are referred to the Investigation Division.
  - b. With clearly defined Departmental guidelines, those cases which are "unenforceable" and have no way of being resolved through the judicial process are retained and closed in the originating Bureau rather than being referred to the Investigation Division.
  - c. Assign the liaison responsibilities between the City Attorney and the Investigation Division to one person.
12. Assign as the highest priority of the new Operations Improvement and Control Group a thorough review of the Department's information systems, including the responsibility for:
  - a. An emphasis on an immediate non-automated improvement in the flow of information and the keeping of records, particularly in the Conservation Bureau.
  - b. A system of workload control for inspections under both permits and complaints which would provide supervisors with more time for direct field supervision.
13. Discontinue the practice of the Conservation Bureau performing a partial inspection within 30 days on complaints referred by elected officials and establish a policy of only complete inspections in the order received.
14. Within the Conservation Bureau, establish procedures for telephone follow-up of old jobs as a substitute for reinspections.
15. a. Change the name of the Abandoned Vehicle Inspection Unit to Vehicle Nuisance Inspection.
  - b. Request the Personnel Department to change the class title of Abandoned Vehicle Checker to Vehicle Nuisance Inspector.



16. Revise procedures involving interactions with the Building and Safety Commission and the Housing Advisory and Appeal Board as follows:
  - a. Continue to examine matters sent to both Boards with an objective of decreasing the caseload and reducing the percentage of cases where the Department recommendation is completely overruled by the Commission.
  - b. Develop procedures to insure that the Board members are adequately informed on technical matters by the several Department engineering staff members who routinely attend meetings, rather than the Commission Secretary.
  - c. Reassign the engineering employee now serving as Commission Secretary to a vacant engineering position and assign the appropriate secretarial duties to an employee in the clerical series.
  - d. Reduce the number of secretarial staff in attendance at HAAB or Commission meetings from two to one person.
  - e. Revise the format of HAAB and Commission agendas and minutes so that agendas will have space for the later typing of the Board action on each item.
  - f. Make better use of the automated typing equipment available to Commission secretarial staff by assigning one employee to operate the machine on a full-time basis, and by assigning typing work, such as minutes transcription and other repeatable documents, to that one position.
17. Revise the Department's Training Program within existing resources to include:
  - a. Placement of all inspector technical trainee positions and the Assistant Inspector Training Coordinator into the new Inspection Bureau and under the jurisdiction of one supervisor through whom all of their activities will be coordinated.
  - b. Improvement of in-service refresher training and explanation of code changes prior to their effective date.
  - c. Development of a skills and training needs inventory.
  - d. Development of training courses or modules to be available based on needs irrespective of bureau.





- e. Assignment of one or more Senior BMI positions to provide classroom instruction to new BMI or Assistant Inspector employees.
  - f. Provision of sufficient space, clerical assistance and supplies to insure a well scheduled and orderly program.
18. Revise the Departmental reproduction services to effect savings from use of improved copy machines and to make greater use of Central Duplicating facilities operated by the Supplies Department as follows:
- a. In cooperation with the Printing Division of the Supplies Department, make arrangements to transfer all reproduction work currently done by mimeograph to the Central Duplicating Shop.
  - b. Require that employees requesting prints above a minimum to be determined jointly by the Supplies Department and the Building and Safety Department, be instructed to complete a central duplicating service "Request for Duplicating Service" form to be processed by a designated employee or employees.
  - c. Allow all employees to utilize the photocopy machine, and that the "Request for Reproduction of Documents--Internal" form be utilized to request prints only when congestion at the machine precludes immediate use. Further, that, if deemed desirable, the Department implement a simple log sheet to record the number of originals and copies.
  - d. Evaluate the resulting workload reduction and eliminate clerical positions accordingly.
  - e. At the earliest possible opportunity, place the photocopy equipment in close proximity to a clerical pool whose secondary function would be to monitor the photocopy machine use, provide for appropriate maintenance of supplies, and make photocopies of materials left for later pick-up.
19. Examine alternative methods of producing and transmitting microfilms, and delivery of supplies and mail to branch offices, and make better utilization of the messenger service provided by Public Utilities and Transportation Department.



20. Develop a procedure for the administration of employee discipline, including a clear definition of the respective roles of line management, Investigation Division and Administrative Services support staff.





## ORGANIZATION

### Current Structure

In order to carry out its duties, the Building and Safety Department has evolved into a number of specialized organizational units--the Building, Mechanical, Engineering Research and Development, Conservation and Administrative Services Bureaus. The activities and functions (plan checking, building and specialty inspections, etc.) performed by the Building and the Mechanical Bureaus are further subdivided into major and minor geographic areas--San Fernando Valley, West Los Angeles, San Pedro and Sunland-Tujunga Districts, as well as the Downtown City Hall Office.

The basic organization of the Department has developed around the "product" (i.e. building inspection or structural or mechanical plan check) delivered to the public and is oriented along traditional craft lines, such as building, plumbing and electrical trades, structural, electrical engineering, and the like. This is one of the three major types of possible organization design, the other two being "functional" and "geographic". As an overlay on the "product" organization, which manifests itself in the Building, Mechanical, and Conservation Bureaus as major line organizations, the Department also has a "geographic" sub-organization under which employees in a district office report administratively to the head of that district, but have official reporting relationships to different major line bureaus.

Although this dual reporting relationship is contrary to the major organizational principle of unity of command, the Department believes that district employees reporting to a major line bureau encourages uniform practices Citywide within these Bureaus. Given the Department's mission of enforcing the building code for all structures within the City limits, some form of geographic diversification is essential. The present system of geographic administrative organization, together with central functional control, is acceptable; however the strong bureau identification which has evolved has resulted in problems, as discussed in this Report.

### Compartmentation

The Audit Team noted a consistent pattern of Bureaus conducting their own affairs in the absence of an overall departmental approach. This phenomenon, described hereafter as compartmentation, is apparent in various Department functions.



Activities which are decentralized include public counters (each Bureau operates its own counter in the same branch office or City Hall location), maintains its own records and files, and administration of complaints and referrals. It was noted by some users of the Department's services, some of whom experience confusion as to whether a permit should be Building, Mechanical, Building-Mechanical, or Conservation in nature, often causing erroneous filing and resultant delays in permit issuance. Internal operations are often hampered due to different forms and procedures for each Bureau. The audit disclosed cases where procedural improvements were not transmitted across Bureau lines, to the detriment of efficient operations. The problem surfaced quite visibly in training activities, where the Audit Team encountered difficulty in analyzing the training program, until it reached the conclusion that there are several separate programs, not one.

The installation of the Automated Text Management System (ATMS) in the Department provides another example. Rather than one centralized word processing center, two locations were established (Conservation and Mechanical Bureaus) due to Department insistence. The installation in the Conservation Bureau appears to be running efficiently due to the high volume of internally generated work. The Mechanical Bureau installation does not generate sufficient work internally and is not being used effectively. The key factor appears to be the reluctance of other bureaus to send "their" work to "another" bureau. There was also reluctance by the Bureaus to provide staff to operate a centralized word processing system. This has reduced potential savings.

The phenomenon of compartmentation is inevitable given the current organization of the Department. It can be alleviated by restructuring the Department along functional lines (as described in later sections of this Report) and by providing a nucleus of staff technicians to provide for overall coordination of departmental activities. Currently, the General Manager and Executive Officer have no resources outside of existing Bureau structures to devote to department-wide problems. Efforts to increase coordination are somewhat hindered by excessive management levels within the various bureaus. Except for the Superintendent of Building and the Executive Officer, all other levels of management have bureau loyalties, leaving no technical staff personnel assigned to institute new department-wide programs or carry out departmental coordinating activities. The "Department" gives the impression of being a collection of separate units, each with its own objectives, procedures and priorities, rather than one operating unit attempting to meet a common goal.





### Realignment of Bureau Structure

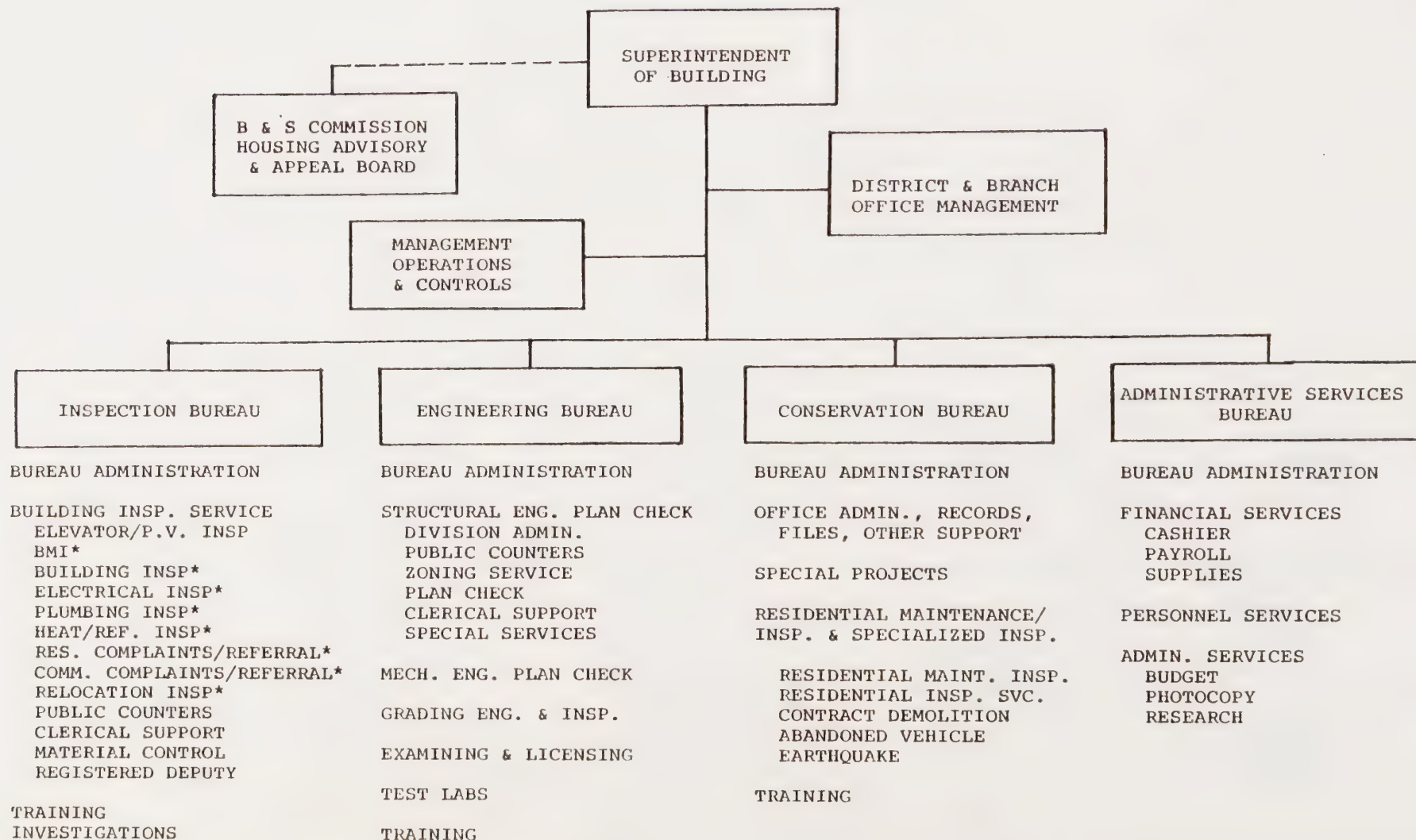
Subsequent sections of this report describe in detail the problems existing in both the inspection and engineering functions. The basic conclusion of the Audit is that both efficiency and effectiveness of operations would be enhanced under a functional organization rather than the Department's current product oriented organization. (See Recommendation No. 1.) In essence, this requires that the present Building and Mechanical Bureaus be replaced by an Inspection Bureau and an Engineering Bureau. The need for this consolidation is especially critical for providing coordination within the inspection function. Audit findings indicate that the current Conservation Bureau is organized around a distinct function and should be modified only slightly, and that the Investigation Division should become a part of the new Inspection Bureau. The proposed organization chart appears on the following page.

The Department's management acknowledges the existence of problems but does not agree with the recommended solution. Its position is that, because separate permits are required for building and mechanical items, the entire responsibility for a permit should be under the jurisdiction of an individual below the Superintendent. The Department considers it essential to have both plan check and inspection in the same Bureau for each type of permit, in order to resolve the inevitable conflicts in code interpretation that occur between inspection and engineering so these two activities will operate as smoothly as possible.

Despite the concerns of Department management, we believe that the balance of factors favors a functional organization. The key factor in deciding on the optimal organizational form is the trade-off of compartmentation among existing Bureaus versus potential compartmentation among new, functional (engineer/inspection) Bureaus. The compartmentation among existing Bureaus and the confusion it creates for the public is an established fact. Functional compartmentation (engineering plan checking vs. inspection) would be only a possibility, and is less likely to occur in a revised structure with management oriented toward a departmental operation rather than a collection of bureau operations. Observation of the inspection and engineering interface left the Audit Team with the belief that there was a practical and thorough understanding of what plan check must approve or authorize and what inspection must approve. It is of interest to note that the Audit Team was prepared to find some degree of professional animosity between inspectors and engineers, based on some confidential comments prior to the audit. This problem did not emerge as significant during numerous interviews with employees from both disciplines. This is another factor which leads to the conclusion that there



# PROPOSED BUILDING & SAFETY ORGANIZATION



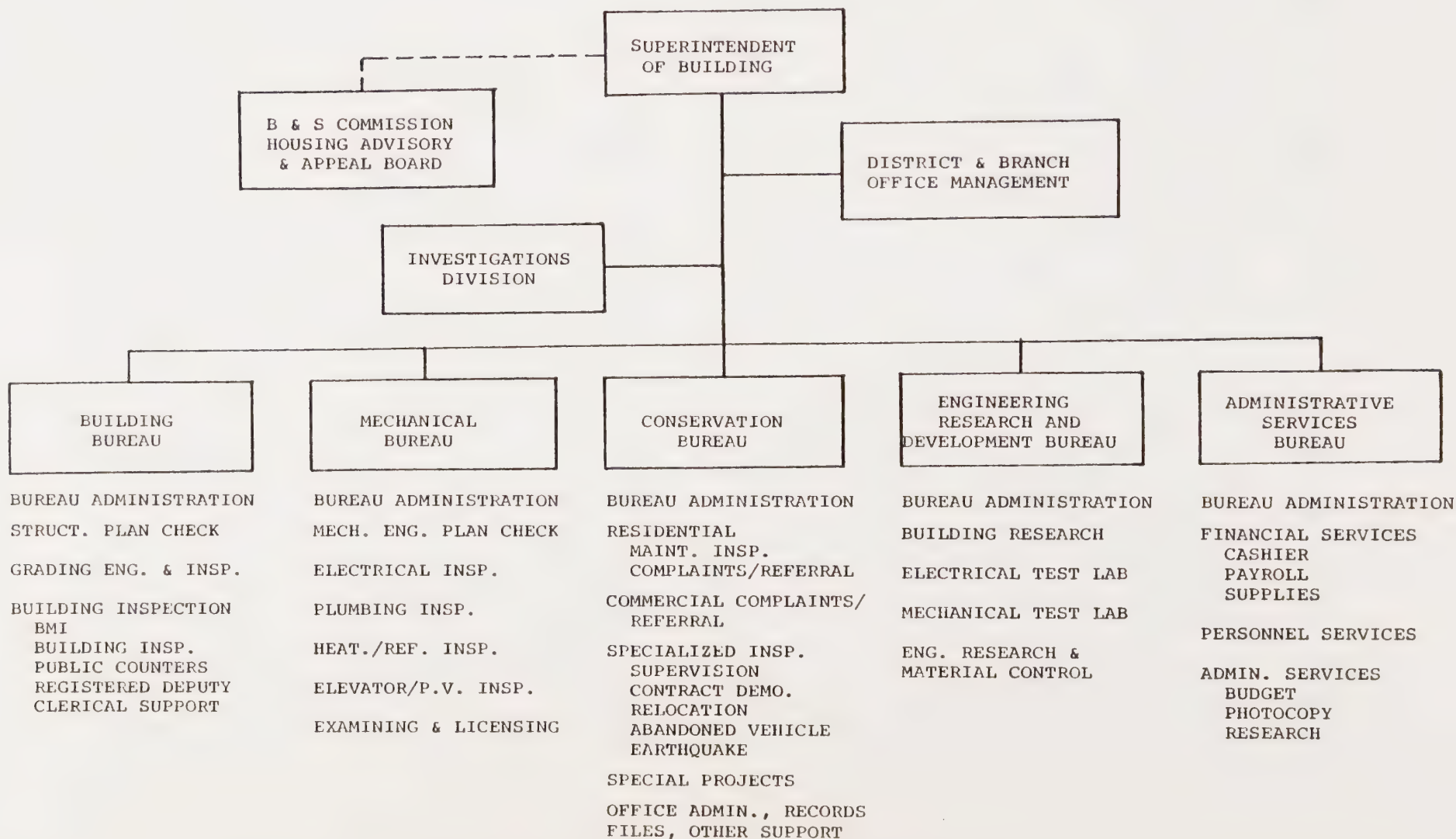
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\*UNITS TO BE MODIFIED BY EXPANDING THE SCOPE OF BMI INSPECTIONS, RECLASSIFYING SOME SPECIALTY INSPECTIONS TO BMI CLASSES, COMBINING COMPLAINT WORK WITH CONSTRUCTION INSPECTIONS.





# CURRENT BUILDING & SAFETY ORGANIZATION





will be less compartmentation under a functional organization than under the present structure.

One significant benefit which would result from the establishment of an Inspection Bureau is that an improved career ladder will be developed for employees in the inspection series. Currently, engineering job classifications (including top management) account for about 13% of Department employment. However, excepting Administrative Services, every Bureau head and assistant is an engineer; in fact, all 24 of the highest paid positions in the Department (through Senior Structural Engineer) have engineering job titles. This imbalance in the organization excludes 87% of the employees from promoting to the higher ranks of management. Although initially the head of the proposed Inspection Bureau will be an incumbent engineer; in latter years there is no reason why someone from the inspection series could not fill this position. The Deputy Superintendent of Building position in charge of the proposed Inspection Bureau should be reviewed from a classification standpoint after the reorganization is implemented to determine if the skills of a high level structural engineer could be exchanged for those of a high level inspection classification. This opening of opportunities for employees in the inspection series to move into top management should prove to be of benefit to the Department.

In reviewing reports of the Mayor's Ad Hoc Committee on One-Stop Construction Permit Processing, it became evident that one of the initial steps to be taken in establishing One-Stop Service Centers would be to realign the district boundaries of the Department of Building and Safety and the Bureau of Engineering so that they would coincide, particularly between the West Los Angeles and City Hall or central district offices. The citizen who has occasion to build or remodel in the area between Robertson Boulevard on the west and La Brea Avenue on the east or north of Beverly Hills and West Hollywood to Mulholland Drive has to go to City Hall for a building or plumbing permit, but must go to the West Los Angeles Municipal Building to obtain a sewer connection permit or an "A" permit to make a sidewalk or driveway repair. This difference in boundaries should be eliminated.

Another operations improvement could result from a better alignment of the working hours and days of the Department with those of their clients. For example the City works on the day after Thanksgiving, the construction industry does not. The industry works on Columbus day, a City holiday. Many of the Conservation Bureau's cases could be expedited through evening or Saturday hours to make it easier for the homeowner to discuss compliance with the Department representative. Some of these changes may be subject to the meet and confer process, but steps





should be initiated as soon as possible to make the Department's services more responsive. (See Recommendation No. 10e.)

#### Department Management Positions: Comparative Analysis

The Building and Safety Department has a relatively large number of high level management positions compared to its nearest City parallel, the Bureau of Engineering (Public Works Department). With a 1977-78 authority of 1,084 regular positions, that Bureau has a top management structure consisting of five positions: a City Engineer, one Chief Deputy Engineer, and three Deputy City Engineers. By contrast, Building and Safety, with only 808 regular positions, has seven management positions: a Superintendent of Building, one Deputy Superintendent of Building II, and five Deputy Superintendent of Building I positions. Both organizations are involved with professional engineering and are geographically spread throughout the City.

The top management positions listed above are approximately equal, level for level, in salary. The ratio of top management to total regular authority in the Bureau of Engineering is one position for every 217 employees, while in Building and Safety it is one for every 114 employees. Ratios of middle management positions to total positions in Building and Safety appear to be better proportioned to organizational size.

The Building and Safety Department is somewhat "top-heavy" in its organization at least in part because of compartmentation. Analysis of the current organization shows that each of the highest seven positions now has a viable role to fill. However, the current organization is, as noted above, not the only alternative. Revising the current bureau structure will relieve the Department of the need for so many high-level positions and resolve, to a degree, the "top-heavy" nature of the Department. As described below, it is proposed, for efficiency and effectiveness reasons, to transfer the functions performed by the Engineering Research and Development Bureau to other parts of the Department. In addition to resolving some of the compartmentation problems, elimination of a deputy superintendent position would ease the Department's current "top-heavy" status.

#### Establishment of Operations and Control Group

The formation of a small technical staff group reporting directly to the General Manager and Executive Officer is recommended. (See Recommendation No. 1b.) This group, which would not have Bureau status, would provide management with the needed manpower to enhance bureau coordination and provide necessary analysis of operating problems to improve departmental



productivity. Pressing needs discovered during the course of the Audit include the development of information systems (including records) and of a job control system for inspections (both permits and complaints). Further, it will provide the Superintendent with staff to identify and correct problems without having to contend with bureau loyalties.

#### Elimination of the Engineering Research and Development Bureau

The Engineering Research and Development Bureau (ER&D) is the most recently formed Bureau. Established in 1964, it is the smallest bureau in number of technical personnel assigned. Current responsibilities that organizationally are now assigned to the Bureau should be reassigned to the bureaus where those functional and operational responsibilities lie as described below. (See Recommendation No. 1a.) Its responsibilities represent a number of activities which could better serve the public if they were transferred to the Bureau or Division of primary concern.

The Materials Control Inspection Section includes the licensing and inspection of structural steel fabricators, fabricators of wood trusses, the inspection of glue laminated wood beams for conformance with industry standards and the inspection of graded plywood and lumber to conform with Federal standards. These functions are all directly related to the construction of buildings and could be reassigned to the Building Inspection Division of the Building Bureau (which in turn would be transferred to the new Inspection Bureau). The activities of the inspectors of this specialized function are initiated by requests from inspectors in the Building Bureau.

The Computer Services Section develops computer applications involving structural engineering design problems. This section could better serve its function if it were transferred to the Structural Engineering Plan Checking Division of the Building Bureau where the computer terminal is located and the engineering data is received and processed for computer application.

The recording of current Workers' Compensation Insurance Certificates for all contractors listed on permits issued by the Department was initiated on July 1, 1977, by the Department because of potential legal liability to the City. It is now performed in ER&D, but as it is essentially a clerical function, it could as easily be done by the Administrative Services Bureau.

The Technical Training Section is composed of technical trainers who were transferred from various bureaus to ER&D in an





effort to centralize the training function. As discussed in the Training section of this Audit Report, this centralization effort has not accomplished the desired results. Although the current organization chart shows the technical trainers in the ER&D Bureau, most of them are independent of that Bureau. The trainers for Engineering, Conservation, Building Inspection and Heating and Refrigeration Inspection are physically located in those respective Bureaus or Divisions, having little or no contact with ER&D. The Plumbing Inspection and Electrical Inspection trainers, by virtue of the location of their desks at the test lab facility, have more frequent contacts with ER&D. The technical trainers should be transferred from ER&D back to the bureaus which utilize their services. Under the current organizational structure these are the Building, Mechanical and Conservation Bureaus. Under the recommended functional bureau structure they would be transferred to the Engineering and Inspection Bureaus. The means of achieving a coordinated training program are discussed in the training section of this Audit Report.

Board reports, code modifications and general approvals are administrative functions that would be better served by reporting directly to the General Manager's office as a staff function. Most of the technical work performed in these areas is done by the line bureaus which are involved in the particular facets of the code in question. The Engineering Research and Development Bureau primarily acts as a coordinator.

The Electrical and Mechanical Testing Laboratories have become independent entities within the Department, and although they now report through the hierarchy in the Engineering Research and Development Bureau, they would be more appropriately assigned to the Engineering Division of the the Mechanical Bureau (which in turn would be transferred to the new Engineering Bureau). The new Bureau, as discussed in a subsequent section of this Report would have responsibility for all mechanical and electrical engineering plan check functions.

Dispersing the Engineering Research and Development Bureau does not diminish necessary work now performed but should reduce the compartmentation and excessive supervisory levels which slow the Department's responsiveness. This and other recommendations for reorganization do not contemplate layoffs. Any position reductions and/or downgradings caused by the reorganization may be accomplished through attrition. Transferring the present functions and staff to the bureaus that they now serve would free the remaining engineering positions to form the small technical staff group reporting directly to the General Manager and Executive Officer.



## ENGINEERING FUNCTION

The engineering function consists primarily of the program known as the Engineering Plan Checking Program. Most engineering positions are assigned to the Building Bureau and perform structural engineering and grading engineering. Other engineering positions are assigned to the Mechanical and Engineering Research and Development Bureaus.

### Structural Engineering Plan Check

The Structural Engineering Plan Checking activity is divided into four basic elements all of which involve the checking of structural plans by engineering personnel.

1. Public Counter
2. Residential
3. Commercial
4. Major Structures

The Public Counter Section reviews plans primarily for residential additions and alterations to residential or commercial buildings. In 1976-77, 81.5 percent of all plans checked were checked at the public counter. The Residential Section checks single-family homes, duplexes, apartments, and residential tracts. The Commercial Section checks plans for all new commercial buildings, including extensive commercial remodeling. The Major Structures section checks plans for high-rise buildings. This category includes buildings subject to seismic requirements, buildings with a value usually in excess of \$500,000 and other large buildings that may be of a complex or innovative character. The Department's present statistical records do not permit a percentage breakdown of the number of plans checked by each of these latter three categories. Statistics that are available indicate that the 81.5 percent of the plans checked at the public counters account for only 28 percent of the total manhours credited to checking and verifying. The remaining 72 percent of checking and verifying time was spent on the remaining 19.5 percent of the structural plans checked. The average time spent during 1976-77 checking and verifying the 5,847 plans not checked at the public counter was 6.5 hours.

Analysis of statistics maintained by the Department indicates that the average time spent by plan checking personnel on each plan varies inversely with the number of plans to be checked.





City Hall (Room 422)

	<u>1973-74</u>	<u>1974-75</u>	<u>1975-76</u>	<u>1976-77</u>
Plans checked	1,626	1,285	2,094	2,160
Manhours Check & verify/ plans checked	13.6	14.9	8.9	8.3
Total Manhours/ Plans checked	25.4	29.3	17.4	18.4

It was noted that the number of available manhours for structural plan checking increased in each of the three major district offices, but in City Hall the number of hours spent on checking and verifying plans decreased.

<u>1975-76 to 1976-77</u>	<u>City Hall</u>		<u>Van Nuys</u>		<u>West L. A.</u>	
	<u>#</u>	<u>(%)</u>	<u>#</u>	<u>(%)</u>	<u>#</u>	<u>(%)</u>
Increase in Plans checked	66	3.1%	452	31.0%	400	4.3%
Increase in Total Man- hours	3,347	9.1	6,558	42.5	1,253	25.6
Increase manhours check/verify	-774	-4.2	4,897	51.6	1,241	39.9

Two other statistics are worth noting, time charged to supervision as a percentage of time spent checking and verifying plans and time charged to checking and verifying as a percentage of total time charged to structural plan checking.

<u>Year</u>		<u>City Hall</u>	<u>Van Nuys</u>	<u>West Los Angeles</u>
73-74	Supervision as	18.5%	4.9%	7.3%
74-75	a percentage	20.9	16.0	2.3
75-76	of checking	10.4	11.7	6.2
76-77	and verifying	25.7	7.5	2.4
73-74	Checking and	53.3%	66.7%	64.5%
74-75	verifying as a	50.9	62.1	63.8
75-76	percentage of	51.1	61.4	63.6
76-77	total manhours	44.9	65.3	70.9

The figures in the preceding table for City Hall do not include the two supervisory positions of Senior and Principal



Structural Engineer who head this Division. Audit findings indicate that more attention should be paid to improving the effectiveness and efficiency of the plan checking function in City Hall. (See Recommendation No. 7)

The Audit included extensive interviews with Department plan check personnel. An initial concern was the reported charge by the architectural and engineering community that there are too many delays in the plan checking process. Discussions brought out many points that are not generally known, particularly as they relate to individuals who try to "work" the system.

Listed are some of the problems enumerated by plan checking personnel.

1. Incomplete plans are filed in order to get an earlier file date, relying on the normal processing delay to complete the plans and then resubmitting the completed plans in lieu of those initially filed. If the initial set of incomplete plans should be checked, an inordinate number of corrections and delays ensue.
2. A set of plans may indicate that engineering calculations are to be attached. They are not available at the time of filing but the architect may submit a set of calculations for a different building rather than delay filing. These irrelevant calculations again delay the plan check process.
3. Incomplete plans are knowingly filed by architects/engineers who rely on the Department's engineers to catch and correct their oversights.
4. The Department and its purported backlog has been used as a scapegoat for those architects/engineers who promise clients faster service than they can deliver. When clients want to know the status of plans, they are informed that Building and Safety is holding them up. The client then calls the Department only to find that the Department may have notified the architect/engineer that plans have been checked and corrections have been available for verification for some period of time.
5. Some clients are alleged to hire an architect on price alone. Rudimentary plans are prepared and filed based on the fee. When the sheets of corrections are forthcoming following the Department's review, the architect brings these corrections to the client's notice indicating that, for an additional fee, the necessary corrections will be prepared.





6. The Department reports receiving plans in which the architectural and engineering elements have not been coordinated prior to filing. This, too, unnecessarily adds to the Department's plan checking efforts and increases existing delays.

These examples indicate that industry practices are at least in part responsible for "excessive" plan checking delays.

Conscientious architects or engineers who file complete sets of plans with necessary computations and specifications conforming to the current code requirements are unnecessarily penalized by the actions of the few mentioned previously. These plans take a minimum amount of time to check and result in a minimum number of corrections. The time required to verify these corrections is correspondingly minimal. Yet on structures of equal valuation, given the current method of assessing plan check fees, the less ethical applicant will pay no more than the conscientious architect while requiring a considerable amount of additional effort on the part of the plan checker.

Among the ideas considered to expedite new construction in the City and increase the productivity of building permit processing in the Department of Building and Safety was a proposal to eliminate the structural engineering plan check function. This subject was discussed with members of the Department's engineering staff as well as local architects and engineers served by the Department. The proposal, in addition to saving several weeks in processing time, would result in an annual monetary saving of up to \$2,000,000.

The feasibility of the proposal is based on the premise that architects, engineers and general contractors are licensed by the State of California as professionally qualified to design and build structures in accordance with whatever building codes may exist and should be willing to stand behind their professional competence. Under such a proposal, the Department's inspection function would continue to make on-site inspections during construction and bring discrepancies to the attention of the contractor who could make the necessary changes or appeal through existing departmental channels.

Individuals who reported suggesting this to their colleagues in their respective professional organizations found that most responses were negative. The consensus seemed to be that the industry feels more comfortable with the Department giving their plans a second look and would rather pay the costs and accept the resultant delays. In this regard, the Department is truly providing a service to the building industry, while costs are passed on to the purchaser of the structure.



Notwithstanding the industry's purported reluctance to initiate such a change, those few who favored such a change noted that the quality of construction should not be adversely affected, provided the Department's current inspection function was not diminished.

Audit findings indicate that the industry has come to depend on the Department's plan check function and would not agree that it be abolished. We, therefore, have made no recommendation on this proposal.

#### Public Counter - Plan Checking

Of the 31,668 plans checked by the Structural Plan Check Division during 1976-77, 25,821 or 81.5 percent were checked at the public counter. The following table indicates the number of these plans checked by each district.

	<u>Public Counter</u>	<u>Back Room</u>	<u>Total Plans Checked</u>
City Hall	10,443	2,160	12,603
Van Nuys	11,059	1,908	12,967
Sunland-Tujunga	413	175	588
West Los Angeles	2,939	1,323	4,262
San Pedro	<u>967</u>	<u>281</u>	<u>1,248</u>
	<u>25,821</u>	<u>5,847</u>	<u>31,668</u>

Fifty percent of the time of public counter personnel is spent checking and verifying plans (15,164/30,089). The average time spent checking each plan at the public counter is 35 minutes (15,164/25,821). The remainder of the time is spent on supervision (7%), consultation (40%), training (1%) and special (2%).

One of the comments in the report of the Mayor's Ad Hoc Committee on Construction Processes involved the public counter. A representative of the Los Angeles Chamber of Commerce made the following suggestion: "Encourage counter checks of as many projects possible to identify problems immediately. Presently, time is used assisting the non-professional who is unprepared. This should be remedied."

The Audit did not find that excessive time was being spent with the non-professional. The Department has prepared standard plans for retaining walls, attached and detached carports, Type V wood construction, wood canopies and a number of other detailed sheets to help the non-professional construct improvements in conformance with code requirements. Public





counter personnel in City Hall have charged more manhours to consultation than to checking and verifying during the four-year period we reviewed. The reason for this has not been established but warrants further analysis by Department management. In addition, the Department's Performance Index (Standard Manhours/Manhours Check and Verify) was reported to be unreliable as applied to Public Counter plan checking activities. The Audit tends to support that conclusion.

Newly hired engineers, following initial training in plan check procedures, are usually assigned to the public counter. It was indicated that some training in public counter procedures prior to assignment to the public counter would help to increase the level of service provided to the public. The average citizen is unfamiliar with the processing of a building permit and needs help. Recent studies of citizen groups have spoken to this issue. The Department has a plan to restructure the physical layout of present facilities on the fourth floor of City Hall. The minimum that should be done is to provide what might be considered a receptionist for those who are not sure what they need or where to go to get it. Although the Department has a booklet entitled "How to Obtain a Building Permit", what is needed more basically is a "road map" indicating where to go for each necessary clearance with the sequence indicated.

There is potential for productivity increases for staff involved in plan checking other than at the public counter. Plans filed at the public counter for later review by "back room" plan check engineers reportedly are often incomplete, as noted in the preceding section. At City Hall these plans are received by clerical personnel, who have a check list on which the applicant is asked to check whether all pertinent data is included; however, this checking system is not always effective. It was indicated that were these plans received by an engineer, that employee could quickly note from experience whether their plans were complete. If not complete, the plans could be immediately handed back to be completed. This would not burden the system with plans which now only lead to delays further along in the plan check process.

#### Structural Plan Check Fees

In reviewing the structural plan check function for possible improvements in productivity it became evident that other than closer supervision, the Department would have to discontinue some things that are now being done in order to appreciably speed up the plan check process.

Verification of the building valuation listed on the application for a building permit is among the first things a



plan checker does. The need to verify this figure was questioned. The Department's present verification procedure is quite involved. When there is a disagreement on the valuation that cannot be resolved, resultant negotiations can be referred all the way to the Building and Safety Commission. The Department agreed that some plan check time could be saved if this valuation figure were not verified, but because the valuation is now used to determine the building permit fee and the structural plan check fee, management believes it necessary to have the valuation as accurate as possible. The Board of Building and Safety Commissioners on September 4, 1977, following a statement by a Commissioner that the dollar valuation does not necessarily reflect the difficulties in inspection or plan checking, voted to ask the Department to establish a six-month trial program using a method other than dollar value to determine building permit and plan check fees.

We had been told that the County Assessor used the Department's permit valuation in determining the market value of new construction projects. The following tabulation was made of randomly selected major construction projects:

<u>Building Permit No.</u>	<u>Date</u>	<u>Permit Valuation</u>	<u>Assessor's Valuation (11/1/77)</u>
LA 82784	12/07/73	\$6,876,000	\$5,790,000
LA 76586	8/03/73	\$1,700,000	\$1,422,000
LA 82875	12/28/73	\$800,000	\$1,670,000
LA 83033	1/03/74	\$3,240,000	\$4,387,000

From this limited sample, it appears that the valuation determined by the Department is not utilized by the Assessor, and the time now spent by plan checkers verifying building valuation figures could be put to more effective use in other more critical areas of the plan check function.

Review indicates that an alternative to the current system of determining structural plan check fees is now available in the Department. It would base plan check fees on the effort involved in checking structural plans rather than the current valuation method which, in reality, is a tax on new construction rather than a fee for services. Exhibit A (p. 27A) was prepared to determine what correlation might exist between plan check fees, standard effort required to check a plan and the professional experience or level of the plan checker. Structural Plan Check Standard MS-1-a, one of the 16 standards for Major Structures, was broken down into four valuation multiples. The fee per hour of plan checking effort varied somewhat from \$36.50 to \$45.00. Plans for major structures are checked by engineers who have been licensed by the State as both Civil and Structural





Engineers. Their hourly rate of pay for 1976-77 was \$13.80. On this basis, the fee charged the applicant with plans for a major steel frame structure with 6 to 15 levels averaged approximately three times (3X) the direct hourly rate earned by the engineer checking these plans. It should be noted that fees also must recover departmental and City support costs.

A similar analysis was performed for single family dwellings. The Department includes three dwelling categories in one hourly standard. For the three valuations shown, \$90,000 being the top valuation on the Department's standard, the fees per hour ranged from \$48.87 to \$62.23, substantially higher than the \$40.00 fee per hour averaged for major structures. A further inequity is that these categories of dwellings are normally checked by Civil Engineering Assistants, the Department's entry level engineer. The hourly rate at this level is \$9.39. If the "times three" factor for major structures is valid, approximately \$30.00 per hour would be a valid fee for an hour of plan checking time for checking plans of this nature. The conclusion drawn from this analysis is that the smaller construction project is paying a disproportionately higher rate to have its plans checked than is the larger more complicated project. In neither case does the present plan check fee relate to the plan check effort. Although the Audit has not gone into greater depth in statistical analysis, the Department should develop a viable fee structure with the statistics and standards that are now available. Fringe benefits, Department overhead and general City overhead could easily be factored into an hourly rate structure based on time standards readily developable from those that now exist without regard to current valuation increments.

Building valuation per se does not provide for the complexity of the plan check effort. A building valued at \$500,000 might be a warehouse or a school building. Both now call for the same fee but the effort of the plan checker is substantially greater in reviewing the school plans. Exhibit B (p. 27B) compares construction projects of equal value (and therefore equal plan check fees) to effort required to check the plans for those type projects as determined by the Department's established hourly standards. As noted, under the present fee schedule, the more time required to check a plan, the lower the hourly rate charged by the Department.

Mechanical and electrical engineering plan check fees do not present the same problems because they are based, not on building valuation, but on the extent and complexity of the mechanical and electrical installations themselves. This type of criterion should also be applied to the structural plan checking effort. The Audit recommendation (No. 3) dealing with this



EXHIBIT A

STRUCTURAL PLAN CHECK STANDARDS

FEE VARIATIONS BY TYPE OF STRUCTURE:

MAJOR STRUCTURES\*

MS-1-a Major Structure - Steel Frame - 6 to 15 levels

<u>Valuation</u>	<u>Bldg. Permit Fee</u>	<u>Plan Check Fee</u>	<u>Standard 7/1/75</u>	<u>Fee/Hour</u>
\$4,000,000	\$ 8,597	\$ 7,307	162 hrs.	\$ 45.10
\$2,000,000	\$ 4,597	\$ 3,907	107 hrs.	\$ 36.50
\$1,000,000	\$ 2,597	\$ 2,207	56 hrs.	\$ 39.40
\$ 500,000	\$ 1,447	\$ 1,230	30 hrs.	\$ 41.00

DWELLINGS\*\*

D-1 Dwelling - Flat Lot - Less than 2,400 square feet.  
D-2 Dwelling - Flat Lot - Greater than 2,400 square feet  
D-5 Dwelling - Hillside - Conventional Footing

<u>Valuation</u>	<u>Bldg. Permit Fee</u>	<u>Plan Check Fee</u>	<u>Standard 7/1/75</u>	<u>Fee/Hour</u>
\$ 30,000	\$ 172.50	\$ 146.62	3 hrs.	\$ 48.87
\$ 50,000	\$ 262.50	\$ 223.12	4 hrs.	\$ 55.78
\$ 90,000	\$ 410.00	\$ 348.50	5.6 hrs.	\$ 62.23

\* Struc. Engr. (16) \$13.80/hr x 3 = \$40.00/hr.

\*\* C.E. Asst. (14) \$9.39/hr. x 3 = \$30.00/hr.

Struc. Engr. Assoc. (27) \$11.09/hr. x 3

Sr. Struc. Engr. Assoc. (15) \$12.38/hr. x 3 } = Approx. \$35.00/hr.





EXHIBIT B

STRUCTURAL PLAN CHECK STANDARDS

EQUAL VALUATIONS:

<u>Standard Code</u>	<u>Valuation</u>	<u>Plan Check Fee</u>	<u>Standard Manhours</u>	<u>Fee per Manhour</u>
A-6 Apartment House - Type V - Over 20 Units - 3 Usable Levels	\$1,500,000	\$3,057	22 hours	\$138.95/hour
A-9 Apartment House - 3 Level Type V - Over Concrete or Masonry	\$1,500,000	\$3,057	36 hours	\$84.91/hour
C-9 Commercial - Type V - 1 or 2 Levels over Type I Subterranean Garage	\$1,500,000	\$3,057	30.8 hours	\$99.25/hour
MS-1-a Major Structure - Steel Frame - 6 to 15 levels	\$1,500,000	\$3,057	86 hours	\$35.55/hour

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AR-2 Alteration - Residential - Structural

\$85,000	\$267	3 hours	\$89.10/hour	
C-1 Commercial - Type V - 1 and 2 levels - Less than 5,000 sq. ft.	\$85,000	\$267	11.8 hours	\$22.67/hour



subject is intended to allow the Department to develop the most feasible approach.

#### Grading Engineering and Inspection Division

Grading permits are required for basement or retaining wall excavations exceeding six feet in vertical depth. Grading permits are also required for building site development in designated hillside areas. There have been far fewer slope failures where building sites have been developed under the current slope requirements of two horizontal to one vertical. Most problems from the recent rains occurred in areas developed prior to 1968 code revisions.

During the recent review of the City's requirements in conjunction with the Mayor's Ad Hoc Committee to Review Building Permit Processes, it was mentioned that there was an apparent duplication of effort in having both the Bureau of Engineering and the Department of Building and Safety review and report on geological conditions associated with the approval of tentative tract maps. The Planning Department forwards all tentative tract maps in hillside areas to the Department of Building and Safety for their review, field inspection if necessary, and recommendation prior to final approval. This matter was reviewed with both the Department of Building and Safety and the Bureau of Engineering. Each agency conducts its review for different purposes. The Geology and Soils Engineering Section of the Bureau of Engineering reviews these maps for stability of slopes adjacent to public improvements such as roads. The Grading Engineering and Inspection Division of the Department of Building and Safety reviews these plans for the safety of the slope and soil conditions of the private building site. We did find that this review process might be expedited somewhat if the two copies of the tentative maps now filed with the Department of Building and Safety were redirected to route one map to each agency so that the specific review might be done concurrently. The Department of Building and Safety has been incorporating the findings and recommendations of the Bureau of Engineering relative to these tentative tract maps into its report to the Planning Department. (See Recommendation No. 8.)

More and more hillside areas are now being considered for development. The number of geologic reports required has therefore increased accordingly. The Department has done a good job of keeping up with this workload without sacrificing established standards. The State's Alquist-Priolo Geologic Hazards Act delineates special studies zones which encompass certain areas of earthquake hazard. Any subdivisions within these zones usually require a geologic and engineering study before approval. Departmental workload statistics indicate that





the majority of geological effort is located in the San Fernando Valley. Because there are no professional geology positions assigned to the Department's Van Nuys Office, all building plans filed at this office have to be sent downtown for geologic review. The Department has three engineering geologist positions in the downtown office. One of these, together with a supporting clerical position, should be reassigned to the Van Nuys Office. Together with the soils engineer currently assigned in this office, this new section should expedite the processing of those plans which fall under the criteria of the Alquist-Priolo Act. Other hillside development in the Valley would also be expedited as a result of this transfer. (See Recommendation No. 9)

### Electrical and Mechanical Test Labs

The 1973 Management Audit stated that a fundamental policy decision must be made regarding the extent to which the City should attempt to enforce the code provisions regarding the sale of electrical and plumbing appliances and equipment in the City. Now, as then, the Audit Team finds that although the basic operations of both the electrical and mechanical test labs are being carried out in a conscientious manner, the Department's existing efforts need to be augmented to ensure an adequate degree of compliance with existing code requirements in this important area.

There appears to be a direct correlation between the number of inspections of electrical appliances and equipment outlets and the number of corresponding items submitted for test approval. Items are tested not for performance of their advertised functions, but whether they are electrically safe or provide adequate backflow or cross connection protection should there be a sudden drop in water pressure in a plumbing system.

The electrical test lab personnel are used interchangeably as either electrical testers or field inspectors. If a backlog of electrical items to be tested builds up, people are brought in from the field. When the backlog is reduced, excess personnel are reassigned to canvass stores and other outlets until such time as the testing cycle is repeated. This method works quite well. The problem that remains, and which the Department has been unable to alleviate, is the continuing increase in the number of "job orders" or "notices to comply" which field inspectors have had to write. Obtaining compliance has not been easy. When equipment, fixtures, or appliances are found not in accord with the provisions of their respective codes, the Department gives written notice to the person violating these provisions to remove them for sale or use. Any person who fails to comply with the provisions of such notice may be found guilty of a misdemeanor and is subject to a fine of up





to \$500 or a sentence of up to six months in the Los Angeles County Jail or both. The Department has provided administrative relief to those who receive such notices before sending the violations to the City Attorney for prosecution, so that the Courts rarely become involved in the enforcement process. These procedures for administrative relief have made the inspectors role more difficult. The estimated number of violations (job orders) for 1976-77 is 4,763. This number is deceptive because less than half of the electrical sales locations in the City can be inspected each year, and each order may cover a number of devices.

The present enforcement system is cumbersome and overly lengthy. A knowledgeable individual who does not wish to comply can string out the appeal process for a year or more whereupon the Department's statute of limitations runs out and the process must begin anew. The City Attorney has been reluctant to put a higher priority on taking these matters to court. An effective method to secure increased compliance with the existing regulations, which were enacted by the Mayor and Council for the preservation of public health, welfare and safety, would be to initiate a citation system similar to that in the Department of Animal Regulation for violations of the City's leash law and that in the Los Angeles Police Department for parking violators. The Department should explore the feasibility of establishing a system of citations for certain code violations. (See Recommendation No. 2.) Council authority would be sought to cite those who disregard the Department's initial notice to comply. Reasonable bail could be established for a first offense with the possibility of increases for subsequent violations. Failure to post bail or appear in court would result in a warrant being issued. The warrant would be entered into the LAPD's Automated Want/Warrant System. It is a simple matter to determine which electrical products have not been approved for sale or use in the City. All approved electrical products have either the Department decal attached or bear the Underwriters' Laboratories seal of approval.

The citation proposal is recommended only for the electrical testing function. The mechanical test lab does not have a system of identifying approved plumbing, heating, ventilating, or air conditioning items as does the electrical test lab. The mechanical test lab has only four assigned personnel, three of whom are mechanical engineers and the other a plumbing inspector, who does not usually provide field inspections. The lab does provide a printed Index of Approved Plumbing Products and Approved Heating, Ventilating, and Air Conditioning Products. The Index is for sale for \$3 and is used by many jurisdictions both within and without the State of California. The City building inspectors carry a copy of the



Index to insure that fixtures, equipment, and materials on construction and remodeling projects conform to the City's safety standard as enumerated in the Municipal Code. At the present time, the City of Los Angeles is the only agency in the country that has a program to test plumbing items to insure that they conform to industry or manufacturer's standards. The City's mechanical test lab is in effect providing a nationwide service.

The Department states that its electrical test lab was initiated to provide a low cost alternative to the existing national standards of the Underwriters' Laboratories. The City has the option to discontinue its electrical test lab, utilize existing personnel to make field inspections and to require that all electrical fixtures, appliances, or equipment bear the Underwriters' Laboratories approval. The manpower made available under such a proposal should permit 100 percent coverage of the City's sales outlets. The City's testing procedure is less costly than the Underwriters' Laboratories because it tests only one sample of each item produced by the applicant or manufacturer. The Underwriters' Laboratories not only inspects a sample of the item but also inspects production facilities to insure that proper quality control is established and maintained for the production run of the item(s) in question. The fees associated with the City's electrical testing activities now recover the cost of such activities. Were the City to provide the additional inspection personnel necessary to canvas the entire City each year, some increased revenue could be anticipated through increased applications for tests. It is not known, however, whether such increases would be sufficient to cover the additional personnel costs. Abolishing the City's electrical testing facility and relying on the Underwriters' Laboratory seal of approval and placing all existing personnel into the field inspection function would negate existing revenue without reducing existing costs. Therefore, it is not recommended at this time. Our recommended citation system should increase compliance and bring in additional revenue with little or no increased cost.

#### Proposed Engineering Bureau

The reassignment of functions resulting from the elimination of the Engineering Research and Development Bureau, combined with the need to achieve increased effectiveness in the Inspection function, and the need to solve the organizational problems noted above, have led to the recommendation to establish an Engineering Bureau along functional lines. This organizational change should lead to the ability to redeploy engineering resources to meet peak plan checking workloads by combining resources of the existing Building and Mechanical Bureaus. Properly implemented, this organization could lead to





the development of engineers with a departmental rather than a bureau orientation. In combination with other changes, the result should be a reduction in the current top heavy staffing of the Department and the creation of management opportunities for employees in the inspection series.



## THE INSPECTION FUNCTION

### Background and Organization

The inspection services provided by the Department of Building and Safety consist of a number of different and specialized activities. Work includes the enforcement and interpretation of the City's zoning, building, plumbing, electrical, refrigeration, heating, air conditioning and grading codes. Other more specialized inspection work includes the enforcement of fire, elevator, pressure vessel and other safety codes and requirements. Augmenting these inspection activities, the Department provides a service to answer complaints and requests received from contractors, City residents, City officials, and various government jurisdictions including the Departments of Planning (and Zoning), Fire, Health, City Clerk and others.

Inspections are performed by staff in the Building, Conservation, Engineering Research and Development and Mechanical Bureaus, and is geographically subdivided as noted in the Organization Section of this Report. Within the bureaus and districts, the code enforcement activities are separated into divisions composed of employees who were formerly construction tradesmen, craftsmen or contractors. These divisions evolved, at least in part, around the trade experience of their employees. For example, in the Mechanical Bureau, the Electrical Division is staffed with former electricians; Plumbing Division is staffed with former plumbers; and the Heating and Refrigeration Division is staffed with former sheet metal workers and air conditioning mechanics. In the Building Bureau, the Building Division is staffed with former carpenters, cement and brick masons and related trades. A variation from this craft-oriented work force is found in the Building Mechanical Division, which is staffed with the hybrid class of Building Mechanical Inspector (BMI). Some BMI's were tradesmen, while others had some or limited construction background and were subsequently trained to perform the duties of a BMI.

### Effectiveness of Building Mechanical Inspection

Until the late 1960's, every type of construction, be it residential, commercial, industrial, or high-rise, was inspected by an inspector from each craft specialty. Establishment of the Building Mechanical Inspector (BMI) class in the late 1960's resulted in the creation of a "generalist" or "combination" inspector trained to provide all of the inspection services



required for wood-frame, one- and two-family dwelling units, accessory buildings and structures. The combined inspection service was later broadened to include the mechanical (electrical, plumbing, etc.) and structural inspections required for swimming pools. As a consequence, the construction or remodeling of a one- or two-family dwelling unit or accessory building which requires separate building, plumbing, electrical, and heating/air conditioning permits, is now inspected by one combination inspector rather than a specialist from each of the other divisions.

Personnel for the combination inspection activity were originally recruited from the specialized areas of inspection (building, electrical, plumbing, heating and refrigeration). It was believed that an inspector could be trained to inspect multiple codes or trades. In order to provide each of these inspectors with practical construction knowledge and code information in those activities unfamiliar to him, the Department established training classes for the combined program, which were attended by specialized inspectors.

In spite of the Department's confidence in the workability of combined inspection, the transition from specialty inspection to combined inspection unfortunately generated much dissatisfaction and apparent resentment, some of which remains even after ten years and was observed during the Audit. Many persons in the specialty inspection divisions, in the building trades and in the construction industry questioned the merits of such a move. It was thought by some that unless an individual attained journeyman status in a construction trade, the individual could not perform inspection of that type of construction. This attitude was exemplified by the past tradition of recruiting specialty inspectors from the ranks of journeymen in the construction trades. More recently, the recruitment efforts for BMI and specialty inspectors were broadened to include not only journeymen, but also building contractors and "graduates" of the Department's Assistant Inspector Training Program, resulting in the Department's inspection services being performed by employees of widely varying backgrounds. The trainee program was an outgrowth of a need to fill vacancies in the BMI program as retirements occurred, and is discussed later in the this report.

The policy of training non-journeymen to be building mechanical inspectors has rekindled resentment from some specialty inspectors and concern by some combination inspectors. These inspectors have asserted repeatedly that the inspections necessary to insure compliance with the code would suffer because some or many inspectors "do not know how to build what they are inspecting" or "they lack practical building experience".





Because of these types of complaints and comments special attention was focused during the Audit on the quality of the building mechanical inspection performed by generalists who have been trained by the Department to make the building, zoning, electrical, plumbing, and refrigeration and heating inspections. Numerous discussions and meetings were held with specialty inspectors, BMI's and supervisors, as well as some contractors and several contracting associations. Former contractors in specialty trades who are now Building or Mechanical Inspectors indicated that it was possible for a contractor to construct some element of a single-family dwelling (i.e., electrical wiring, framing, plumbing, etc.) in a faulty manner and have little concern that a combination inspector would discover the deficiency. Others in the building industry have indicated that the majority of the inspectors provided fair and generally thorough inspections for both single-family and commercial construction. It was also indicated that there are some rather isolated cases of either poor inspection or overly critical inspections in residential and commercial structures. The contracting associations emphasized the need to have inspectors who are capable of discussing the violation identified by the correct inspector in terms which the contractor or his employees can understand in order to correct the violation. They are concerned with "notices to correct" which are vague, not self-explanatory, or which do not help the contractor make corrections. Likewise they are concerned with an inspector who may not be well versed in the practicalities of building construction but instead rely too heavily on "the book" (code).

Investigation indicates that inspectors (both specialty and combination) are able to provide, in the vast majority of cases, advice and counsel to contractors regarding corrections that are necessary. Some contractors, after having their work rejected by an inspector, argue that either another code allows the specific installation or that some other City inspector allowed a similar installation in a different part of the City, while others have argued that "this is the way they have always installed their work", in an effort to convince an inspector that the work should be approved. In these types of cases, City inspectors explain what is wrong, why it is wrong and what can be done to correct the violation. This assistance is provided by both the combination and specialty inspectors. While the City's Codes may be somewhat difficult to interpret, and all contractors and construction tradesmen may not be fully aware of the City requirements, it was also observed that some of those people constructing buildings are not well versed in their own trade and may have to share some of the responsibility of not being able to resolve differences with City inspectors. Likewise, there are some inspectors who may not be sufficiently versed in the code or construction techniques and may at times create problems for both



the knowledgeable and not so knowledgeable citizens, contractors or tradesmen. Nevertheless, the general conclusion of the Audit is that BMI inspectors (who were either specialty inspectors earlier or are "graduates" of the Department Inspector Training Program) are performing their duties in a professional manner, are knowledgeable about construction practices, were able to discuss corrections and construction techniques with contractors, and were competently performing what appears to be difficult work. The belief by some parties in the Department of Building and Safety that some of the inspection work is inferior continues to exist perhaps in part due to the separation of inspection activities, needed improvements in training, organizational problems in handling inspection workloads and complaints, and what may be an arbitrary restriction that precludes Building Mechanical Inspectors from inspecting anything other than wood-frame one- and two-family dwelling units.

The Audit of the inspection function attempted to focus specific attention on the division between the work performed by the Building Mechanical Inspector and the work performed by the specialty inspectors. In initiating combined inspection the Department believed that the work performed by several specialty inspectors could be performed by one inspector without lessening the quality of the inspection or the structure, provided these employees are adequately trained. This, in large measure, has been achieved.

Observations indicate that consolidated inspection work performed by a Building Mechanical Inspector may be extended to wood frame structures of any type occupancy. While the mechanical systems and structural elements of a one- or two-family structure are more simple than some commercial or industrial structures, a number of commercial structures now inspected by specialty inspectors contain systems that more closely resemble the systems in single-family dwellings than they differ from them. Many wood-frame commercial type structures built in the City use material and techniques that are either identical to or very similar to those used in a single-family residence, the only significant difference being the use of the finished structure and its occupancy. The occupancy requirements for rooms of general assembly, restaurants, health care facilities, and the like dictate somewhat different building requirements such as fire protection, one-hour walls, stairways, aisle widths and sprinkler systems. It was possible to train one person to perform the work of several specialty inspectors for wood frame one- and two-family structures. It should also be possible to train qualified Building Mechanical Inspectors in the codes affecting commercial buildings so that they could perform inspections of any wood-frame building, and various types of masonry, concrete or steel commercial structures. With the







development of an adequate training program in the commercial and general inspection areas, the BMI program could be extended to a class of work now assigned to specialty inspectors. This change could result in greater flexibility to solve the recurring workload problems created by the construction of large numbers of residential and wood-frame or masonry commercial buildings. (See Recommendation No. 10b.) Specialty inspectors would continue to inspect the more complicated structures.

### Senior Inspectors, Supervision and Production Control

Senior inspectors in the various speciality and combined inspection activities generally act as first-line supervisors, while other seniors perform the so-called "more difficult and complicated" inspections requiring more experience and expertise. Apparently, when the combination inspection program (building mechanical inspection) was created, all the work associated with one- or two-family residential inspection was transferred into the Building Bureau, leaving only the "more difficult" work associated with plumbing, electrical and heating inspection in the Mechanical Bureau. As inspectors were transferred out of the Mechanical Bureau to the combined inspection unit, the proportion or ratio of Senior Inspectors to inspectors became quite high in the Mechanical Bureau. The remaining inspectors were "teamed" with seniors for supervision and training. To some degree, this occurred in the Major Structure Sections in the Building Bureau where high-rise buildings are inspected by seniors.

Within the various Bureaus the supervisory span of control (ratio of supervisors to employees) in inspection varies considerably from division to division. Within the Building Bureau, major divisions have approximate ratios of supervising seniors to inspectors ranging from one to three to one to seven. Conservation Bureau units have ratios of one to four and one to five. The Plumbing, Heating and Electrical Inspection Divisions in the Mechanical Bureau have ratios of about one to one or one to two and utilize a supervisory technique known as the "buddy system", where a senior inspector will make inspections and supervise an inspector in the same or neighboring territories. Unsolicited comments from various inspectors and supervisors in the Mechanical Bureau indicated that the "buddy system" has been less than successful from a supervisory standpoint. When actively engaged in making inspections, seniors do not have sufficient time to supervise the inspector to ensure that Department policies and procedures are being carried out. Further, adequate time is not normally available to train the recently hired specialty inspector.

It is clear that some change in supervisory ratio is required. One solution would be to change the class titles of



supervisors, so that supervisors would not routinely perform inspection duties; another and perhaps better solution would be to establish a more reasonable ratio of supervisors to inspectors throughout the Mechanical Bureau. While it is not precisely known which supervisory ratio (ranging from one to four, one to five, or one to seven) is the optimum, an increase above the one to one ratio is needed. (See Recommendation No. 10f.) The Department needs the flexibility to vary the ratio to meet changing conditions, by increasing the ratio of supervisors to inspectors as greater number of inspectors are inexperienced and need more supervision and training, or by decreasing the ratio of supervisors to inspectors when the bulk of the inspection force is stabilized and is considered experienced. Variation of supervisory ratios is now quite difficult or perhaps impossible because of the way the inspection function is fragmented among the various Bureaus.

While observing the work performed by supervising inspectors, it became apparent that an individual supervisor cannot, based on the information available to the supervisor, determine if an inspector is adequately filling a work day by checking on the progress of the jobs that have not called for inspection. Many supervising Senior Building Mechanical Inspectors in the Building Bureau have between 3 and 7 inspectors under their supervision. The requests for inspection are not routed through the supervisors and then to the inspectors, but are given directly to the inspectors by the clerical staff who take the requests. On the average each of these inspectors has responsibility for between 400 and 800 open permits. Each day, the inspectors, while in the branch office or downtown headquarters, plan the inspections they will make during that day. After determining the route to take to make requested inspections, they may pull other permits from their file (which have not yet requested an inspection) and check these construction jobs (this is known as a "progress" inspection) as they make the requested inspections. It is doubtful that each supervisor is able to check the outstanding or active work retained by all of his subordinates to determine if they are taking with them a sufficient number of jobs to fill the work day. While some inspectors do adequately fill their work day even without close supervision, it has been observed that other inspectors could probably better organize their day so as to make more "progress" inspection stops. By better utilization of existing inspectors, the total number of inspections per inspector could increase without increasing the number of inspectors on the payroll. By making more progress inspections, potential code violations or other problems could be identified before they are "built into a wall" or "encased in concrete" requiring much effort and expense to correct. These "progress"





inspections could benefit the contractor and builder by reducing construction costs.

The Department has assembled statistical performance reports which indicate the average number of inspections made per day per inspector in each of the inspection divisions. A ten year review of these performance reports indicates that there are only minor deviations within each of the divisions from the average number of inspections made per day in any one year. The Building Inspection Division, the Building Mechanical Inspection Division and the Electrical, Plumbing, and Heating and Refrigeration Divisions have each evolved what appears to be an informal level of performance that has not been exceeded and tends to be maintained year after year, with variations in the average daily number of inspections amounting to only fractions of a percentage point. There is a significant difference between the average number of inspections made by BMI's versus those made by specialty inspectors: more inspections are made per day by BMI's than any of the other specialties.

The workload of the inspectors in the Commercial Complaint Referral and the Residential Complaint Referral Sections of the Conservation Bureau consists of complaints and referrals, job orders, and permits. At the time of this Audit, the backlog in those two Sections was approximately 4,600 and 3,000 assignments, respectively, which resulted in an average of 230 and 170 assignments per inspector, respectively. There is no systematic or routine way for the Principal and Senior Inspectors to know and control the workload assigned to each of their inspectors. There is no routine analysis of backlog in terms of age of assignments, magnitude or range of the various jobs, nature of the complaint or seriousness of the violations, or number and types of complaints sent to the Investigation Division.

In the attempt to manage the workload, various control systems and tickler files and logs have been established by various levels of management. A two-man control center for complaints and referrals is operative in the Conservation Bureau. Each Senior has set up a log to control the receipt and location of the various assignments among his inspectors. This takes considerable clerical effort on the part of the Seniors--so much so that they indicate that they do not now have adequate time for direct field supervision. Throughout the Department the assorted systems do not provide adequate data to the inspectors, or to the various levels of management, as to the number of assignments outstanding among the various inspectors, thus hampering the ability of management to balance the workload, to evaluate effectiveness of the personnel, and to make adjustments to workload and/or the personnel among the inspectors and among the





seniors. Without adequate workload data, the possibility exists that at various times the Building Bureau may be overstaffed and the Conservation Bureau understaffed or vice versa because the Building and Safety Department management lacks data on workload in each of the Bureaus.

The Department is aware of workload information problems and has expressed an interest in developing a computerized permit control system which would provide improvements in workload control. An automated Departmentwide job control system is a worthwhile ideal, but it is improbable that a new system of this large extent could be given any priority in the Data Service Bureau in light of the Citywide budget reductions following the passage of Proposition 13. Prior to attempting to implement automated systems, the Department should focus its efforts on bureau consolidation and reorganization as well as the improvement of existing manual systems. A good manual system can later be transformed into a good automated system. Conversely, a bad manual system could be converted into a bad automated system, solving no problems and costing great amounts of money. The Department should utilize the proposed Operations and Control Group to create a Departmentwide system of workload control which would, among other things, provide supervisors and management with information about the quantity and nature of workload carried on by not only the inspection, but also the engineering staff. Part of the outcome of a workload control system would be to transfer much of the clerical work, now performed by supervisors, to clerical personnel, thus relieving supervisors for more direct field supervision which would result in turn in the establishment of higher levels of performance whereby inspectors will perform a greater number of inspections each day. (See Recommendation No. 12b.)

#### Citywide Inspection Activity

Inspection activities in the Department are performed in the Building, Conservation, Mechanical and Engineering Research and Development Bureaus, as noted above. All inspectors, seniors, and principals, whether specialty or combined, are paid at the same salary levels, while performing only slightly different activities. The inspection work in the Building Bureau is divided into divisions such as grading, building, and building mechanical inspection services. Grading and building inspection is a specialty activity utilizing the Building Inspector classification. BMI's inspect wood-frame one- and two-family dwelling units. The Conservation Bureau BMI's investigate complaints and conduct residential maintenance inspections. The Conservation Bureau also utilizes the electrical, building, plumbing, heating and refrigeration inspectors to investigate complaints against commercial property. The specialty inspectors



in the Mechanical Bureau perform electrical, plumbing and heating/refrigeration inspections in commercial, industrial and high-rise structures. Each of these three Bureaus operate in all geographic areas of the City. Much of the field work performed by these Bureaus is uncoordinated. For example, within any area of the City, a specialty inspector (Building Inspector, Electrical Inspector, Plumbing Inspector) may be making a construction inspection for a commercial, industrial or high-rise structure. Another specialty inspector assigned to another bureau may be making an inspection in response to a complaint. Still other inspectors may be nearby investigating a complaint or performing a construction inspection in a one- or two-family dwelling unit. In the various Bureaus little or nothing is done to determine if there are other work assignments in process for the same piece of property nor is such coordination possible since little information is available to supervisors.

This manner of workload organization, overlapping geographic inspection areas, division of work, and separation of inspections and complaint investigation has diminished the ability of the Department to respond to changing workload levels and patterns (commercial vs. residential; inspections vs. complaint work). Pressing and immediate workloads in one division are not a concern of the other divisions. Likewise, the training needs of the three bureaus are somewhat different by virtue of the work each performs. As a result there exists an inability to shift or loan personnel among divisions thus hampering the overall effectiveness of the Department inspection effort.

A recurring problem experienced by the Department of Building and Safety has been the fluctuating workload associated with building inspection activities and complaint work. Seasonal pressures and needs occur in different fiscal years for either more BMI's or specialty inspectors. Great pressures appear to have been experienced in the very recent past with huge increases in new construction of single-family dwellings, as well as the remodeling and reconstruction of existing single-family dwelling units. Likewise, a good deal of commercial construction activity has occurred, but with almost no high-rise construction.

In an effort to meet the rising workload associated with the construction of new single-family dwelling units, the Department proposed and executed contracts with recently retired employees, who could return to work for a maximum of 90 days in the fiscal year. This helped cushion the effect on the existing and growing workload during the summer and fall months (including fill-in for inspectors on vacation or jury duty) and helped relieve some of the burdens to make called for inspections.





However, this type of action is not a long-term solution to meeting the problem of fluctuating workload.

Another example of an attempt to solve a workload problem resulted from a "job action" in 1977 by unionized building inspectors, who stayed off the job for two days protesting the slowness in salary negotiations. At the conclusion of the "job action", personnel from the Conservation Bureau were loaned to the Building Bureau to help make inspections that were called for during the "job action". However, some of the inspectors sent from the Conservation Bureau to the Building Bureau were unable to perform the assigned inspection tasks because they were no longer familiar with the details of the Building Code or had never made some of the inspections being requested (such as foundation and swimming pool inspections). This type of incident is evidence that some of the inspectors in the Conservation Bureau (both specialties and BMI's) handling residential complaints and commercial referrals may, by the length of duty in the complaint investigation area, lose a working knowledge of the code. This loss, which could be a consequence of inadequate initial and/or follow-up training, or of an inadequate rotation schedule, makes it difficult or impossible for them to make satisfactory construction inspections.

A related problem reported by supervisors in the Conservation Bureau is that due to a large backlog, their most serious problem is maintaining motivation among inspectors who, by the nature of their work, must frequently deal with unhappy people.

Another factor that has tended to foster the specialization of inspection work, and thereby reduce the department's ability to adjust to changing workloads, is the limitation imposed on combined inspectors. The Building Mechanical Inspectors do not make inspections on construction that is other than one- or two-family dwelling units. Likewise, they receive no training as preparation for advancement into the more specialized areas of commercial, industrial, and high-rise building inspection. Under the current training and organization structure, inter-bureau transfers to meet peak workload situations are difficult if not impossible to achieve. The Department now has a voluntary rotation system, but it is not sufficient to maintain or improve inspector skills. The department should implement a system of improving inspector skills to qualify them for different assignments.



### Identification of "Non-Permitted" Work

Another result of having too many uncoordinated inspection activities is the inability of the department to inspect "permitted" work and, at the same time, identify non-permitted construction. Ideally, all builders, contractors, or owners will comply with the codes and submit the structural and/or mechanical plans to the Department and obtain the necessary plan checks and permits for construction. The Department then knows the location of the work and can monitor actual construction activities when the applicant or builder calls for the required inspections. However, some builders and/or building owners unfortunately do not follow the requirements of the code, either to avoid the payment of fees, to avoid the inspection or due to ignorance of the provisions of the building and allied codes. Should "non-permitted" (bootleg) work be undertaken, the Department relies heavily on complaints received from the general public or contractors to identify where this work is located. If a complaint is received, it would be referred to any one of several inspection activities in the Department for verification; but if no complaint is submitted to the Department, the Department would normally not know of this construction work. Some years ago, the Department did assign inspectors to specific areas of the City to make "called for" inspections and to identify the "non-permitted" construction work taking place within that area. Now, however, the Department indicates that there is not sufficient time to perform all "called-for" inspections and also investigate construction work that is unfamiliar to the inspector. Further, with so much construction work underway, and so many different inspectors in the various areas of the City at the same time, the Department indicates that it has become increasingly difficult to isolate the "non-permitted" work because each inspector assumes that some other inspector is checking the unfamiliar work.

Several building trade associations have indicated displeasure with the current method of code enforcement. These associations emphasize that the full force and weight of the Department's enforcement activity appears to fall primarily on the contractors who are attempting to abide by the law by taking out the required permits. Work under a permit may be inspected in intensities ranging from general to that which was described as "nitpicking". These associations stated that they believe that little or no time is spent in ensuring that the work which does not have a permit is identified. They concluded that the Department is not attempting to identify "non-permitted" work with the same "enthusiasm or relish" that it pursues corrections to "permitted" work. It was indicated that because some contractors are not taking out permits, they are installing work of inferior quality, poor workmanship and, perhaps, creating





hazards. This type of work usually is less costly to a building owner or manager and may tend to put other contractors who will take out a permit at a competitive disadvantage.

To verify the allegation that the Department does not seek out construction work installed without permits, the level of enforcement attained by the different inspection activities was investigated. It was observed that little time is devoted to finding non-permitted work other than in investigating complaints. The Building Mechanical Inspectors have more requests for inspection (on one- and two-family dwelling units) than could be inspected. The speciality inspectors' territories are large and require an extensive amount of time traveling between jobs. These two conditions (large workloads and extensive driving time) have made it substantially more difficult for them to find time to identify bootleg construction.

#### Establishment of a Single Inspection Bureau

The Audit Team's investigation of the Department's inspection function, organization, supervision, workload controls, training and enforcement effort, revealed that the amount of work performed, number of permits outstanding and the amount of supervision varies from division to division. Because the inspection activities are divided among different bureaus, different and sometimes overlapping geographical areas, it is impossible for anyone in the department to "manage" the inspection function. Specialty inspectors traditionally argue that commercial, industrial, and high-rise construction inspections require more skill and effort and cannot be compared against the output of some other operating unit. The combination inspectors indicate that their work is equally demanding because of the number and diversities of inspections required from one inspector. Others maintain that their "work requires more skill, more knowledge, more time to perform." These assertions make it exceedingly difficult to quantitatively evaluate the form of organizational structure.

Because of the diversity of activities and the previously mentioned "differences", any conclusion about organization must be a qualitative one formed after observing the different inspection divisions activities and their employees at work. It is the judgment of the Audit Team after observing how the various inspection units function that more thorough inspections occur on commercial, general and high-rise structures, including apartment buildings, than on new single-family residential construction or additions to one- or two-family residences. This appears to result because insufficient time is available due to the high level of single-family construction and a relatively fixed number of BMI positions



assigned to the inspection activity. This illustrates the need for the Department of Building and Safety to better distribute and balance the inspection and complaint investigation work it performs to achieve a more uniform application of the City's building and safety codes to the various types of structures that are being built and modified. Further, a better balance must be struck between the time devoted to inspecting the work for which permits have been secured and the identification of work performed by contractors without permits. Another basic need is for the various inspection and complaint referral functions that are now fractionalized to be more closely aligned. At present, there is no individual or group in a position to evaluate the inspection workload or activities being performed in three different Bureaus of the Department. In prior audits, and in this one, it was observed that coordination is very difficult to achieve between the different bureaus performing similar inspection work, that code interpretations made by certain bureaus are not being uniformly applied by the inspectors assigned to other Bureaus or geographic areas. There remains uncertainty about the assignment of complaint work. Contractors and the general public are confused by the way the Department divides its building inspection workload. Further confusion is created at public counters based on the way they are arranged, and the variety of counters at which permit applications may be obtained.

It was identified in a prior Audit that one solution to the dispersed or compartmentalized operations would be the creation of a single inspection bureau. This type of consolidation was not proposed at that time because there appeared to be some efforts directed towards creating a better atmosphere of coordination; however, whatever improvements may have occurred have not resulted in better service to the public, better training to the Department's inspectors, nor uniformity of application of the City's building codes to the diverse kinds of structures built in this City. There are too many separate units performing basically the same type of inspection work, the perceived differences between units are artificial for the most part, and they are the result of isolating various organizational units. In order to better serve the public, this compartmentation must be eliminated.

The Organization Section of this Audit Report describes the consolidation of various Department activities into a functionally oriented bureau structure. As part of this reorganization, the Department should consolidate its various building inspection, material control, training, investigations and complaint referral activities into a new Inspection Bureau, which would better allocate existing inspector resources to perform the investigations, inspections, complaint referrals, and





training. This would vest in one manager authority to quickly and efficiently assign personnel to perform inspection work on a timely basis and in accordance with changing workload. This manager should be designated to provide the inspection training for the inspection personnel throughout the department. Thus inspectors could be adequately trained to perform inspection work throughout the department and any deficiencies could be identified and corrected without long delays.

The establishment of an Inspection Bureau would bring under the control of one manager the vast majority of building inspection services now scattered throughout the Conservation, Mechanical and Building Bureaus. The new consolidated Inspection Bureau, as proposed, would perform both specialty inspections and building mechanical inspections, training and investigations. Within the new Bureau, the building mechanical inspection and the residential complaint and referral inspection should not be separated into the different divisions or units.

The complaint work and building mechanical inspection functions must be combined. Smaller geographical inspection areas must be created in order to form a "basic building inspector area". One Building Mechanical Inspector would then be required to provide both inspection service and complaint investigation associated with all residential and most commercial structures within an assigned area. In addition, the inspector would be required to identify "bootleg" work in that district. (See Recommendation No. 10a.) This step of basic geographic responsibility, combined with the recommended expansion of combined inspection to include all wood-frame structures and certain types of masonry/concrete or steel structures, has the potential of broadening the scope of BMI's and providing significant improvement in service at a reduced cost. The area concept will require a constant monitoring of workload by Department management. Size of areas should be adjusted to reflect qualitative and quantitative workload factors. Such factors would include number of inspections required, number of complaints received, and experience level of the inspector.

Under this recommendation, the Conservation Bureau would retain residential inspections service, residential maintenance inspection, contract demolition, abandoned vehicle inspection and, earthquake hazardous building inspection activity. (See Recommendation No. 1d.)

#### Field Equipment

Improvements to field equipment would enhance the effectiveness of inspectors. Flashlights and special clothing are indicated for certain situations, particularly in the



Conservation Bureau. It also has been observed that each field inspector must do an inordinate amount of writing. Most of this writing involves the preparation of "Notices to Correct" various deficiencies identified during field inspection. Much of the writing involves copying information already on a permit such as the address of the job, the name and address of the contractor, plus the writing of necessary corrections. Each inspector would be far more productive if the inspectors were equipped with portable dictating equipment to record corrections as they are identified. More time could be spent on inspections rather than writing or printing. (See Recommendation No. 10d.)





## INVESTIGATION DIVISION

The purpose of the Investigation Division, as with other inspection divisions of the Department, is to insure that facilities constructed within the City of Los Angeles comply with the applicable provisions of State Law, the City's Zoning Code, and the various building codes. The difference between Investigation and the other inspection divisions is that Investigation will attempt to secure compliance only after an inspector in some other division has been unable to achieve it after a certain period of effort. Upon referral of a file or permit to the Investigation Division, a senior inspector or inspector in that Division will attempt to contact the violator in order to obtain compliance or a timetable in which compliance could be expected. This may mean only that the owner or contractor will take out a permit for the correction of an existing violation (which could involve demolition of or major changes to existing improvements). In any event, the file or complaint will be returned to the division that originated the request for follow-up and inspection once a permit was obtained. That division would then insure that the work was performed in accordance with the code.

In some instances, however, owners, builders or contractors have refused to comply with the code. It then becomes necessary for the Investigation Division to schedule a hearing conducted by the City Attorney. The purpose of the hearing, like the initial referral, is to obtain compliance with the building or other codes. Should that hearing fail to resolve the problem, with the violator still refusing to take out a permit or abide by the applicable code provision, the Investigation Division would request that the Criminal Division of the City Attorney's Office file a complaint against the violator. This action would result in the City bringing the violator to court to resolve the issue.

In addition to the above, the Investigation Division conducts complaint referral inspections as they are received from Council offices and the General Manager's office; conducts other special investigations involving controversial issues such as the location of massage parlors and adult book stores, in all parts of the City or one particular area like Hollywood; attempts to recover funds for checks that have been returned to the Department for insufficient funds; and attempts to collect delinquent payments for elevator, boiler, and pressure vessel renewal permits.



The Division, under the apparent supervision of the General Manager, does not report to any of the other bureaus within the Department. It is organized along lines similar to those of the Building Bureau and the Mechanical Bureau. Within the Investigation Division, there are combination and specialty inspectors in the electrical, plumbing, and building inspection disciplines. Multiple violations are divided among and assigned to specialty inspectors.

Most files referred to the Investigation Division originate in the Conservation, Building and Mechanical Bureaus. More work appears to be received from Conservation than Building or Mechanical. In addition to this type of work, the Division receives assignments to "sweep" an area for code violations. As a consequence of receiving work from different sources for different purposes, the Investigation Division is performing both staff and line functions. This creates operating problems for the Division which reduce its effectiveness.

The role of the Investigation Division and its interface with other Bureaus has been examined. The Building Bureau, the Mechanical Bureau, and the Conservation Bureau each follow differing procedures in conducting their inspections, in attempting to gain code compliance, and in referring files to the Investigation Division. Complaints about the methods of handling difficult cases abound in both Investigation Division and in the originating bureaus. For example, Conservation Bureau inspectors complain that frequently a file is returned to them several months or even a year later without having been resolved. They now believe that it is better for them to work with the owner over a period of time rather than send it to the Investigation Division. Conversely, inspectors in the Investigation Division complain that the originating Bureaus refer files which are sometimes incomplete, six to twelve months out of date, or involve violations which are minor in nature and would probably not be enforceable if the issue had to be resolved in court. As a result of these factors, the Division is heavily loaded with assignments, many of which fall into a "probably unenforceable" category.

The referral of these kinds of cases to the Investigation Division results in wasteful activities. Presently it is performing a number of clerical and review functions that more properly belong at the first level of enforcement in the Conservation, Mechanical, or Building Bureaus. It is possible that supervising seniors and principals and perhaps chief inspectors in each of the above mentioned Bureaus are "tossing" work to the Investigation Division to reduce the number of open building permits they have. In turn, the Investigation Division attempts to quickly gain some level of compliance and "toss" the





permit or file back to the originating bureau for disposition. This has been and is creating a paper work mill or "ping-pong" game between Bureaus and Divisions. The individual bureaus should determine, within either Department policy or specific guidance from Investigation Division, what type of violation would not be worthy of further enforcement effort. Many "violations" would then never be referred to the Investigation Division, and staff time and effort could be directed to more pressing cases or reassigned to do other inspection work. This would also reduce the number of open files having little or no likelihood of obtaining compliance. (See Recommendation No. 11.)

The Investigation Division should be incorporated into the new Inspection Bureau and report directly to the Bureau head. This reporting relationship would free the Superintendent of Building from directing the activities of this Division and place this responsibility at a more appropriate level. The basic functions of Investigation could be improved by bringing the first and second levels of enforcement closer together. This would promote the rapid identification of developing problems such as workload increases from non-uniform referral procedures, inadequate inspection or first level supervisory review, and referral and identification of building code violations that are probably unenforceable. (See Recommendation No. 1c.)

Discussions with representatives of the City Attorney's Hearing Program in the Criminal Division indicate that the Department's Investigation Division adequately prepares its files for both hearings and criminal prosecutions and generally refers good cases to them. They indicate, however, that of the eighteen people in the Downtown Investigation Division office, two or three inspectors regularly bring cases to them for prosecution. The City Attorney suggests that it would be preferable to have one person act as liaison to the criminal prosecutions unit and to testify in court, rather than have several people with this responsibility. The City Attorney indicated that it is more important to have someone knowledgeable in court procedures, the City Attorney's approach, and what the court needs to know, rather than having someone on the stand knowledgeable only about the details of a single code violation. (See Recommendation No. 11c.)



## THE CONSERVATION FUNCTION

### Background

The Conservation Function is carried out primarily by the Conservation Bureau, with some program activities being performed through the Mechanical Bureau. The purpose of the budget program entitled "Conservation of Existing Structures and Mechanical Devices" is to secure compliance with code provisions intended to insure safe conditions and proper usage of existing buildings. The objective as stated in the Detail of Department Programs is "to insure the safety and protection of building occupants through enforcement of code requirements by elimination of potentially dangerous and unsafe conditions; and provide information to potential purchasers of residential property regarding City records of said property."

In order to carry out its objectives the Bureau has a 188-person staff composed of inspectors (85 BMI, 36 specialty positions) engineers (9 positions) and a large body of administrative and clerical staff. The major part of the Bureau's personnel are devoted to Office Administration activities, which, staffed with a mixture of clerical, inspection and engineering positions, provided support for field inspection personnel; operate the public counter, the complaint control center and communications services; and maintain residential property records.

The Special Projects Unit is staffed with five Structural Engineers, one Building Mechanical Inspector (BMI) one clerk and one Administrative Assistant. This unit performs plan checks on those plans that were submitted in response to Conservation Bureau inspections; processes appeals and represents the bureau at the Housing Advisory and Appeals Board and before the Commission; and coordinates development of Federal programs. In the past it has coordinated the development of the computerized information system for the Conservation Bureau.

The Residential Maintenance Section conducts the Residential Maintenance Inspection Program. Basically, these are inspection surveys of selected geographic residential areas of the City. Their operations are funded from the Community Development Trust Fund.

The Residential Nuisance Abatement Section is staffed with BMI positions. It responds to complaints and referrals on residential buildings having one or two units.





The Housing Inspection Service Unit has five BMI's and one clerk. In fact one of the BMI's is handling noise complaints and another performs inspections with the Neighborhood Conservation Program for the Community Redevelopment Agency under contract with the City. The remainder of the activities of this unit are devoted to "\$80 fee" inspections which culminate in the issuance of the Certificate of Housing Compliance.

The Commercial Inspection Section is staffed with various specialty inspectors, i.e., Building Inspectors, Plumbing Inspectors, Electrical Inspectors, and Heating Inspectors. This section responds primarily to complaints and referrals on commercial and residential structures of three or more units. It also conducts routine re-inspections for private schools, inspects sprinkler turn-offs, conducts change of occupancy surveys upon application by owners and inspects temporary structures such as bleachers and tents for public use.

The Specialized Inspection Section is staffed with BMI's except for three Abandoned Vehicle Checkers. The names of the Specialized Inspection units are generally descriptive of the functions performed. It provides contract demolition inspection, relocation inspection, earthquake hazardous research, and abandoned vehicle checking. The name of the Abandoned Vehicle Inspection Unit has caused some concern among property owners. It is reported that in fact abandoned vehicles are not usually the subject of the program and that the use of that title has caused unnecessary resistance and lack of cooperation on the part of individuals who might own the vehicle stored in their own back yard. A more appropriate name of the unit would be Vehicle Nuisance Inspection, with a corresponding change of the Abandoned Vehicle Checker classification to Vehicle Nuisance Inspector. (See Recommendation No. 15.)

As a part of the Conservation Function, approximately 29 positions in the Mechanical Bureau are devoted to inspections of existing boilers and pressure vessels and elevator inspections.

Bureau Management (four positions), Office Administration Section (56 positions), Special Projects (eight positions) are devoted to providing office and support activities to those units engaged more directly in field inspection programs. These support activities are provided primarily to Conservation Bureau personnel but to some extent to other bureaus throughout the Department. Thus approximately 68 positions or over one third of the total of 188 positions are involved in support activities. Another 36 positions are involved with various types of specialized inspections, earthquake research and supervision. The remaining 84 positions (less than half of the Bureau) are involved directly in field inspection and enforcement



intended to achieve the primary impact purpose of the Conservation Function, namely:

Contract Demolition	6
Commercial Inspection	27
Residential Nuisance Abatement	32
Residential Maintenance Inspection	19
Total	<u>84</u>

#### Manifestation of Problems

The fundamental situation facing the Conservation Function is the obsolescence and deterioration of commercial, industrial, and residential buildings in the City. The Conservation Bureau cannot fully resolve this situation; it would take an extremely large Building Inspection staff with strict enforcement, including legal action when necessary to achieve this objective. Many factors have contributed to the current situation where deterioration is taking place more rapidly than rehabilitation and replacement. These factors include:

- a. Physical age of the structures.
- b. Economic factors, wherein, for example, landlords find it uneconomic to maintain buildings where rents do not provide the proper return.
- c. Abuse of the buildings by tenants.
- d. An increasing lack of respect for regulatory authorities.
- e. Federal income tax laws which allow 100% depreciation of existing buildings used for income purposes each time a building is sold.

Since 1974 the Department has in effect moved its emphasis from enforcement by survey, to responding to complaints, both in terms of the number of buildings inspected and the number of inspection personnel assigned to these efforts. There has been a significant increase in commercial and residential complaints and referral work load from under 7,000 in 1974-75 to approximately 10,000 in 1977-78. One factor contributing to this increase is thought to be the tendency of Council members and their staff to encourage constituents to submit complaints. Reportedly the percentage of complaints originating from Council offices has increased significantly.

Several months ago, a procedure was established to give complaints and referrals originating from Mayor or Council





offices special handling. This procedure requires immediate (usually a 30-day) response to the Mayor or Council office based on the findings after the first inspection, without final resolution of the complaint. Frequently, extra follow-up inspections and reports are required causing duplication of effort and possibly contributing to the build-up of the backlog. (See Recommendation No. 13.)

### Backlog

In commercial inspection especially, the number of open unresolved complaint files being carried by the unit has increased from about 3,000 in June of 1975 to 4,600 in September, 1977. Inspectors are carrying an average of 230 cases in the Commercial Inspection Section and 170 cases in the Residential Nuisance Abatement Section. Particularly in the Commercial Inspection Section, it is reported that under current operating procedures, inspectors do not have time to follow-up with repeated field inspections on this backlog and to work with and encourage owners to comply voluntarily. The inspectors believe that with more time and improved procedures, compliance can be improved a great deal by inspector follow-up and encouragement. In order to better utilize the inspector's time, the Department should establish procedures for telephone follow-up of old jobs, thereby eliminating the need for time consuming reinspections. (See Recommendation No. 14.) The use of a street address/telephone directory and the notation of the telephone number on the job order would be useful steps toward this goal. Follow-up with owners should be further facilitated by the implementation of more flexible working hours for inspection and public counter personnel. Evening and Saturday hours would enhance the Department's ability to contact and confer with property owners not available during normal office hours. (See Recommendation No. 10e.) By providing this service at the convenience of the owners, the City will encourage the owner who wants to comply with the code.

The most profound improvement to workload control and backlog will be the proposed reorganization of the Department to include an Inspection Bureau and implementation of a "basic inspector plan", where one inspector would be responsible for all inspection in a designated area, from permitted new construction to detection of non-permitted work and identification of developing deterioration in commercial and residential structures. While covering an assigned area for both conservation and new construction inspection, each inspector should be able to make far more inspection stops each day, with less travel time, while acquiring a greater familiarity with the community. Furthermore, priorities would be more easily established, unenforceable problems more quickly resolved, and



backlogs would be reduced or prevented. (See Recommendation No. 10a) Pending such a reorganization, the Department should assign Conservation Bureau inspectors to work in the Valley Office, reporting in the same manner as Building Bureau inspectors. (See Recommendation No. 9b.)

There appears to be a lack of commitment and follow through in the zoning enforcement inspection activity. The objectives of this activity should be a follow-up on enforcement of conditions imposed by the Zoning Administrators in zoning administrative cases and in conditional use cases. The original purpose for which this unit was established is still valid, it therefore would appear that there should be a renewed commitment to such enforcement. This commitment can best be attained through the application of the proposed "basic building inspector area" where responsibility for a specified geographic area would be held by an individual inspector. The size of the area will vary according to workload factors, as discussed above.

#### Hardship Emergency Loan Program

Operated by the Conservation Bureau and funded by Federal Community Development Block Grant funds, the Hardship Emergency Loan Program (HELP) is designed to assist low income persons in certain designated areas of the City in correcting deficiencies discovered by Building and Safety Inspectors.

The HELP program has been operative for over one year. Although evaluation at this time may be premature, it would appear that the program has not been too successful. It is possible, if not likely, that administrative costs will exceed the amount of loans ultimately extended.

This program is considerably different from the normal activity performed by the Department. Many programs with similar objectives are included within the Community Development Department. The program is too new at this point to flatly recommend transfer, but the two Departments should study the matter in order to make the program effective. Improving the HELP program could involve the following possible actions (see Recommendation No. 6):

- a. Transferring operation of the program from Building and Safety to the Community Development Department.
- b. The City dealing directly with the contractor, eliminating the necessity for qualifying homeowners to deal with the contractor.





- c. Eliminating the requirement for a second trust deed on the loan, making it a signature loan.
- d. Establishing a revolving fund of \$10,000 in the City to be administered by the Controller's Office to expedite execution of the contract pending receipt of the funds from the HUD office.
- e. Increasing the maximum available loan somewhat above \$5,000 (perhaps as much as \$10,000) to those owners who qualify.

#### Record Keeping System

Much inspector time in the Conservation Bureau is expended in waiting for legal research, ownership research, permit research, and access to job files. When time-consuming research may be involved, inspectors will sometimes issue a job order or issue a permit without adequate reference to files and records that may exist.

Modification of procedures and office support to inspectors would allow inspectors and senior inspectors more direct time to "work" assigned cases thereby improving voluntary compliance. Within the Conservation Bureau changes that can be made include the following:

- a. Improve telephone (switchboard) operations.
- b. Improve ownership research support by expeditious completion of address-permit number index (See March, 1973 Management Audit Report Recommendation 6b(1)).
- c. Improve control and access over job files (brown folders) by adding shelving and space, reviewing the appropriateness of the arrangement of the files on the shelves, index and control procedures (missing files are assumed to be non-existent), possible color coding, and improving the sign-out card system so that it can function properly. (See Recommendation No. 12.)

On a department-wide basis, the system, or systems, of record keeping can be improved. Currently, permits and other files and records are maintained by each bureau. However, the Conservation Bureau has the nucleus of a departmentwide permit and records filing system for all "inactive" Certificates of Occupancy, permits, and other records. An improved system has been conceptualized by the Conservation Bureau management, but apparently has not been fully documented in a formal plan. At this time the scope of the effort to improve existing records and



files in the Conservation Bureau and to create central files for the entire department should be expanded. Consolidation and reorganization of the Department's record keeping system for departmentwide use should be one of the tasks of the proposed Operations and Control Group.

In the 1973 Management Audit, Recommendation No. 6 outlined several steps to establish centralized filing of inactive Certificates of Occupancy and building permits within the Conservation Bureau. This recommendation was only partially implemented. Nevertheless, what was achieved is a substantial improvement over the records and files as they existed in 1973. However, much more can and should be done, such as:

- a. Complete the Certificate of Occupancy microfiche jackets for each address in the City, with all permits and other pertinent documents relative to an address inserted in its jacket. (See 1973 Management Audit Recommendation 6a and b(2).)
- b. Establish a complete and controlled computerized address, permit number index with reference to other pertinent documents in the files relative to that address including reference to the existence of a brown folder file with more voluminous reports and documents relative to that address. (Recommendation 6b(1) would have been the rudiments of such an index.)

The Department should complete plans for reorganization of the record keeping system in conjunction with current plans to revise space arrangements. (See Recommendation No. 12a.)

#### Enforcement Policy for Code Violations

In the past 20 years there has been an evolution in the City enforcement policy with regard to inspection and correction of code violations of existing buildings in the City. In view of the apparent enforcement difficulties being experienced in the Conservation Bureau and Investigation Division and through the City Attorney's Office, there may be a need at this time to again re-evaluate the City's goals, enforcement authority and policy regarding existing structures. Suggestions offered by various inspection personnel during the course of the Audit included the following:

- a. Establish the legal basis for the issuance of citations, subjecting the owner to fines for deliberate violation of the Code regarding illegal additions or illegal changes of occupancy without a permit. Contractors who install such illegal additions without a permit might be





similarly subjected to citation and fine. Such a procedure could also be used as an enforcement mechanism where the owner or contractor fails to respond to a job order or notice to correct deficiencies. The objective would be to encourage more timely response to Building and Safety Department job orders and notices and at the same time to recover in part the cost of enforcement from those owners and contractors who were the violators, as opposed to financing the Building and Safety Conservation effort through the General Fund.

- b. In order to enforce the foregoing, it was suggested that a Housing Court be established as part of the Court system to function solely for the purpose of adjudicating these kinds of citations and violations. In this connection, it was suggested that such procedure would expedite the enforcement process. In some cases knowledgeable owners are able to delay compliance or demolition for months or years.

These suggestions have merit; however, they have limitations in their applicability. Code violations in existing structures fall into so many different categories, from deliberate non-permitted alterations to unintended violations and simple deterioration, that establishing a system of fines and adjudication would be quite complex, and probably more costly than the revenue they would generate. In spite of these complexities, the Department should explore the possibilities of establishing citations and fines for certain types of Building and related code violations. (See Recommendation No. 2a.)

Upon implementation of the proposed reorganization, the Conservation Bureau will continue its current record keeping and other specialized functions. The major change proposed is the assignment of residential and commercial complaints to inspectors within a given geographic area in addition to combined building inspection.



DUPLICATION OF EFFORT BY FIRE DEPARTMENT

The May, 1978 Management Audit of the Fire Department (pp 45-49) described the "significant overlapping of both the Charter responsibilities and the code provisions which are to be enforced" by the Fire and Building and Safety Departments. The result has been a duplication of effort in both plan checking and construction inspection. That audit recommended a cooperative study of procedures and codes to minimize duplication of work. Some discussions have been held, and a status report is due to the Mayor and Council in late 1978. Recommendation No. 4 of this audit provides for the continuation of this cooperative effort.





## TRAINING

### Overview

Substantial City resources have been devoted to employee training in the Building and Safety Department. Although not physically located there, all of the Department's technical trainers are functionally assigned to the Engineering Research and Development (ER&D) Bureau. These technical trainers perform most of the several training functions carried out in various settings for the benefit of different classification groups. The Department's training programs, which have evolved to meet varying needs, include an intensive three-year training course for Assistant Inspectors, intensive training for Building Mechanical Inspectors (BMI), indoctrination training for the specialty inspector classes, refresher/update lectures on a continuing basis for all inspection employees, on-the-job training for new engineers, and various nontechnical training courses.

### Types of Training

Assistant Inspector. Coordinated by the Personnel Division of the Administrative Services Bureau, the Assistant Inspector training course is intended to transform an individual with little or no experience in construction into a competent City inspector. Over a three-to-four-year period an Assistant Inspector receives classroom instruction and training in the field as he progresses through three pay grade levels. The first fifteen weeks consists of classroom training, which is provided during City time utilizing four retired inspectors retained through personal services contracts. The use of retired inspectors as instructors was initiated during the course of the audit. It was implemented because the large number of Assistant Inspectors (more than 50) made it impractical to continue the prior procedure of one-on-one training by regular inspectors.

In addition to the City instruction, the trainee is required to take evening courses in Inspection Technology in order to qualify for advancement through the higher pay grades. During the eight months following the in-house classroom instruction, the trainee receives on-the-job training in one of the inspection divisions. The assignment of trainees to only one division, rather than rotating the employee through several divisions, was implemented recently. The previous rotation system caused too much work for inspectors from whom the Assistant Inspectors had received the field experience. The intent of a single eight-month assignment is to relieve



inspection divisions of the frequent influx of new, inexperienced trainees. This revised practice may help to alleviate some of the workload in the divisions, but its effectiveness on the overall training of an Assistant Inspector, and his preparation for promotion to a regular inspector position, should be carefully evaluated by the Department.

Following a positive evaluation by on-the-job supervisors and the training coordinators in the Personnel Division, the Assistant Inspector is advanced after one year to the II pay grade. A specialty area (usually BMI) is selected at that time for each trainee. On-the-job training continues through the III level, in most cases in the Building Mechanical Inspection Division, or in the Conservation Bureau. After completion of the third year of training, the employee is usually eligible to take the examination for promotion to an inspector class.

Assistant inspectors, whose experience or education qualifies them, receive initial appointment at either the II or III pay grade levels. Instead of the fifteen-week classroom training under the contracted retired inspectors, they receive intensive training from the Department's technical trainers similar to the BMI training (discussed below).

BMI Training. Training for newly-hired BMI's, administered by the Building Mechanical Division, consists of approximately two months of intensive classroom instruction and visits to field sites with the Department's technical trainers. This intensive training is needed because of the nature of the BMI class. Since there is no occupation in private industry which develops all the skills and knowledge for a combined inspector, the new BMI employee is not expected to be experienced in all phases of construction that he will ultimately be inspecting. The intent of the training is to cover those construction and Code areas in which the new employee's experience is lacking. The four technical trainers present the basic elements of their specialties, provide opportunities for field observations and present the pertinent code sections. Time spent with each trainer varies: ten days for Building, five days for Heating and Air Conditioning, nine days for Electrical, and eleven days for Plumbing.

Specialty Inspectors. Training for the specialty inspectors (Plumbing Inspector, Building Inspector, Electrical Inspector, and Heating and Refrigeration Inspector) consists of two to four weeks of one-on-one field training with a technical trainer or with another inspector. New employees in these classes are expected to be experienced in the areas of their





specialty, so training need not be as intensive, and is limited to subjects such as code interpretation and division policies.

Refresher or "Tailgate" Sessions. Originally implemented to provide information regarding new code and technology developments to supervisors, refresher lectures are now given to all inspectors on a regular basis. The four inspection technical trainers plan lectures for and make regular visits to each affected branch or division office. The subjects, frequency and duration of these lectures vary, based on needs perceived by the trainers or upon requests from various inspector supervisors. The sessions range from 30 minutes per week to one hour per month.

Engineer Training. The training for engineers is provided by a Senior Structural Engineering Associate. Although organizationally assigned to the ERD Bureau, his office is located with the Structural Engineering Plan Check Division. New engineering employees are put through a planned program of progression intended to cover the code in two weeks. At the end of the two-week period the new engineer is given a plan to check, using the correction sheet. A regular plan checker will then check the same set of plans, and the two correction sheets will be reviewed by the trainee and the instructor. This type of training continues from one to six months, depending on the trainee's capabilities, and the Department needs. On-the-job training continues at the public counter, after which the engineer may then be assigned to another plan check function.

Non-Technical Training. The Personnel Services Division provides various other training programs. The supervisory development course is provided for both technical and non-technical employees. Taught by the Senior Personnel Analyst once every two years, it consists of 14 sessions of three hours each, one half on City time and one half on the employees' time. The Senior Personnel Analyst also develops material for lectures on safety to be given by Senior Inspectors to all employees as required by Cal OSHA. In addition, the Senior Personnel Analyst provides training for cardiopulmonary resuscitation (CPR). Recently, however, due to the heavy workload generated by the Assistant Inspector training coordination, little time is available for these other training activities.

#### Problems in Department Training of Inspectors

Persons involved in the construction industry, from individual contractors and contracting associations to the inspectors and senior inspectors themselves, are concerned about the quality of training provided to inspectors. Contractors believe that they should be provided with inspectors who are



knowledgeable in the code provisions and building practices relating to the construction work they inspect. Inspectors likewise, realize that they can deal with contractors and discuss corrections with them in an intelligent manner only when they have a fundamental and an adequate understanding of code requirements. The inspectors have expressed the belief that training needs improvement in order to better equip them with the tools required for interaction with the construction industry. Although this concern is most evident among combination inspectors, the specialty inspectors also indicate that refresher and in-service training activities should be improved. Both inspection groups indicate that, prior to the effective date of significant code changes, the Department should provide them with adequate training to explain the purpose of changes and how they should be interpreted. (See Recommendation No. 17b.)

It was observed during the Audit that the Assistant Inspector and new BMI classroom technical training sessions are not taught by persons in the BMI series. Only specialty inspectors provide instruction. The material provided by these trainers educates a new inspector in the theories and methods of construction and related inspection; however, it only partially prepares an inspector for field work, since the specialty inspectors cannot provide a BMI point of view on procedure, techniques and approach. Although assistants or new BMI's will be assigned to field inspectors, these trainees will more than likely be exposed to one inspector's methods rather than any planned curriculum representing the Department's desired approach. A BMI position should be assigned as a technical trainer to the Assistant Inspector and new BMI training programs in order to focus the separate technical subjects of building, masonry, electrical, plumbing, heating, etc., for application to the BMI duties. This approach would insure uniformity and give a new employee greater confidence and ability to deal with contractors and tradesmen. (See Recommendation No. 17e.)

The various types of training provided for Department employees are conducted independently, with little apparent central supervision or coordination. For example, the Personnel Services Division runs some programs, the Building Bureau operates another program, and the technical trainers work independently on other programs. Management obtains information about training needs and about the various training activities through monthly reports from the Personnel Division and through monthly training committee meetings. This committee, chaired by the Executive Officer, is composed of representatives of various bureaus. The technical training officers are not regular members, attending the meetings infrequently, by invitation of the committee chairman. Information from these sources is





utilized to develop policy, but at this time little coordination is provided through this channel.

Lack of central control of the training activities is not noticeably detrimental to engineering or non-technical training; however, it does decrease the effectiveness of the inspector training at all levels. Caught in the middle are the four inspection technical trainers. Each of these individuals perceives that he has several "bosses". For example, assignments are received from the Chief Building Mechanical Inspector to train new BMI employees. In addition, the training coordinator in the Personnel Services Division may request the services of the trainers through the ER&D Bureau. Further, each trainer responds individually to requests from various inspection supervisors for special research or training problems. This lack of unity of command promotes a situation whereby the trainers must be available to many, yet accountable to none. The trainers also reported that little communication takes place among themselves in terms of coordinating their activities or curriculum. This fragmentation does not provide for the most effective utilization of technical trainers as a resource.

#### Consolidation of Training

In order to provide proper coordination and supervision of the inspection technical trainers, all of the trainers should be drawn together into one unit and their actions directed by only one individual. Although such a transfer was made on paper by transferring the trainers to ER&D, supervision is inadequate. An alternative placement would be in the Personnel Division, together with the Assistant Inspector Training Coordinator. A more satisfactory alternative would be to transfer all persons involved in Inspector and Assistant Inspector training to the proposed Inspection Bureau. Under the control of the same Bureau head who bears the responsibility for all inspection, these trainers could combine their talents into a workable program of initial and refresher training to insure uniform interpretation of the code by all types of inspectors in all parts of the City. (See Recommendation No. 17a.)

#### Establishment of Training Modules

Initial training of inspectors especially in the BMI class, is of particular importance because of diverse backgrounds and their role in code enforcement and public contact. The Department should so structure the training resource to make an inspector out of whatever "raw material", however educated or skilled, is available. A method to provide such structure would be to identify small, distinct units or modules within the existing training courses and lectures. These modules should





then be assembled to provide different courses of instruction to meet different needs, or provided as individual units for remedial or refresher purposes. Input from supervisors and management regarding the content of each module and their assembly into a curriculum is highly important. After that, of even greater importance is central coordination to insure that the modules would be available to all employees. For example, modules regarding Building Code interpretation should be offered to both engineering and inspection employees. Further, modules developed to provide refresher lectures could be later added to the curriculum for initial training. (See Recommendation No. 17c.)

This modular training system should be based on each employee's experience and training accompanied by a skills inventory of each employee based on his experience and training. (See Recommendation No. 17d.)

#### Allocation of Resources for Training Activities

The single most pressing need expressed by all persons involved in training activities is space to conduct the training classes. Although some rooms, such as the Commission Hearing Room, can be made available for intermittent use, no room exists for the daily training sessions for Assistant Inspectors or new Building Mechanical Inspectors. The inspection technical trainers reported that they often have difficulty finding an unoccupied room to conduct classes. These trainers also indicated that supplies and clerical assistance for preparation of training materials are not directly available, but must be "scrounged". These types of situations are detrimental to the morale of the trainers, and are detrimental in general to the training program as a whole. The Department should acknowledge the importance of training to the successful development of employees, particularly inspectors, and allocate space, supplies and support for the technical trainers. (See Recommendation No. 17f.)



## ADMINISTRATIVE SUPPORT FUNCTION

Administrative tasks which support the Department's operating programs are carried out primarily in the Administrative Services Bureau. Activities are performed through three divisions, the Administrative Services Division, the Financial Services Division, and the Personnel Services Division.

### Administrative Services Division

A broad range of duties are performed in the Administrative Services Division. On a year-round basis this Division performs budgetary monitoring activities and special studies at the request of Department management. This Division's role in the Department's budget preparation procedures is that of assimilation and presentation of budgetary decisions formulated by Department management, with little or no impact in the decision-making process. Other services provided by this Division include microfilming and tabulation of data from Building Permits, photographic services, reproduction services, forms control, and records retention monitoring.

The reproduction services are provided through a small duplicating center under the Administrative Services Division, which is staffed by three clerk typists and a senior clerk typist. Two photocopiers and a mimeograph machine operated by these employees service the entire Department. In order to reduce costs and control inappropriate use of photocopy equipment, the Department requires that all employees complete a "Request for Reproduction of Document-Internal" form and that only the assigned clerical personnel operate the photocopy equipment. The mimeograph machine is used for high volume prints. It is utilized in lieu of the Central Duplicating shop of the Printing Division because the two to four day time lag for output is unacceptable to the Department, and because it is felt that the costs of printing through Central Duplicating exceed the costs of printing in-house.

It may appear that the Department conserves funds through these practices, because the cost of materials for their own reproduction center is smaller than the billing would be from Central Duplicating. However, the costs of the four clerical positions who operate the photocopy and mimeograph equipment bring the Department's operating costs well above the total billing costs for equivalent service from Central Duplicating, and counteract any savings which might result from controlling the photocopy use. Department employees often wait while the Reproduction Services clerical staff operate the photocopy





machines, so staff time is not conserved by prohibiting regular employees to operate the photocopiers.

Changes in procedures could result in more efficient use of staff and equipment, and conservation of City funds. Workload of the Reproduction Services clerical staff may be reduced by allowing all departmental employees to operate the photocopy machine, rather than requiring that the work be done only by the Reproduction Services clerical staff. Any increased costs due to a possible increase in photocopy use would be offset by the reduction of Reproduction Services workload. The transfer of all or most of the mimeograph work to Central Duplicating would bring about a further reduction in workload in the Building and Safety Reproduction Services Center. The City Printing Division foreman has indicated that arrangements could be established between the Central Duplicating Shop and the Building and Safety Department so that certain rush jobs, such as Commission agendas and minutes, could be given priority in Central Duplicating, eliminating the turnaround time problem. With proper planning, other jobs requiring multiple copies now reproduced by mimeograph could be reproduced in Central Duplicating, substantially reducing the workload in the Building and Safety Reproduction Services center. These reductions in workload should result in a reduction in personnel. The net effort of transferring mimeograph work to Central Duplicating, and allowing all Department staff to operate photocopy equipment is a minimum annual savings of \$4,000. This would occur if two of the four clerical positions are retained, if photocopy costs increase, and if all items now duplicated by mimeograph were transferred to Central Duplicating. Greater savings, up to \$22,000 annually, may be achieved if only one clerk typist is retained.

Relocation of the photocopy equipment should accompany these changes in procedures. It is understood that the Department currently has a severe shortage of space for its operations and that relocation of photocopy equipment would be difficult at this time. But as space becomes available in the future, the most efficient arrangement would be to locate the photocopy equipment in a location accessible to Department employees and in close proximity to a clerical pool. Here the main duties would be typing and/or filing, with the shared task of monitoring the photocopy machine and supplies. Individuals with long jobs or who otherwise are unable to wait their turn during heavy usage periods could leave their work with the clerical staff for later pickups. (See Recommendation No. 18.)

#### Financial Services Division

This Division is responsible for Departmental accounting and furnishing supplies and equipment for the Department. The



accounting function includes payroll preparation, cashier services in all branch offices, statistical reports, monitoring of expenditures for Federally funded programs, and accounts receivable. The supply function includes acquisition of equipment items, supplies, printed forms, and provision of messenger services between City Hall and the branch offices.

The cashiering function is provided at City Hall and the branch offices by clerical positions under the supervision of a Principal Clerk Building and Safety in the Financial Services Division. These cashiers operate large multi-keyed cash register machines. These machines have 18 entry keys through which transactions of different types are registered and the totals accumulated. Due to the large number of different types of fees for which cash is collected, it is necessary to enter more than one type of transaction on some of the entry keys, and account for the totals of those entries manually at the close of business. These cash register machines are very old, and repair parts are no longer available. During the course of the Audit, the Department had been evaluating different, more modern equipment to replace the outmoded cash registers. Following the conclusion of the Audit field work, a selection was made and funds appropriated for the purchase of eight highly versatile electronic cash registers which could be adaptable to future automated workload and permit control systems.

Messenger service is provided within the Department by one Delivery Driver position. This employee leaves City Hall at 8:30 in the morning and returns at approximately 2 p.m. after having made deliveries to all of the branch offices (San Pedro, West L.A., Van Nuys, Sunland-Tujunga, and the Test Labs). After his return at 2 p.m. the employee works on the mail and other tasks relating to the supplies function. The delivery driver not only delivers messenger mail and U.S. Mail to the branch offices, but also cases of supplies. His duties also include the microfilming of permits which must be performed every day on a small microfilm camera which he sets up at the branch office, makes the appropriate photos, and then takes it to the next stop. Department staff indicates that the Department of Public Utilities and Transportation (PU&T), although its routes are almost completely compatible with Building and Safety Department needs, will not transport the supplies or the microfilm and will not perform the necessary microfilming, so the PU&T messenger service is not utilized by the Department of Building and Safety. The Department should institute procedural changes in order to avail itself of PU&T messenger service. Alternatives which should be explored by the Department include installing microfilm cameras in each of the branch offices so that exposed film could be transmitted to City Hall for processing. Revision to methods of ordering supplies should be made. Branch offices could easily





order supplies directly from the Supplies Department as is done successfully in the Bureau of Engineering (Public Works). Items which must be centrally ordered, such as printed forms, may be transported frequently enough by Department staff travel between City Hall branch offices for meetings or other business. Arrangements may then be made with PU&T for daily delivery of remaining messenger mail and U.S. Mail between City Hall and the branch offices. The Department should eliminate the Delivery Driver position and attain a substantial savings. (See Recommendation No. 19.)

### Personnel Division

The major concerns of the Personnel Division are personnel record keeping, professional personnel assistance to management and employees, non-technical and assistant inspector training, employee relations, and affirmative action. (Training and affirmative action are discussed in other portions of this Report.)

The Personnel Division is very active in employee relations. The Department Personnel Officer attends labor negotiations with the CAO as the representative of the Department management. Follow-up administration resulting from adopted memoranda of understanding is conducted in this Division. A problem is foreseen by staff of this Division with respect to different units receiving differing sick leave and bereavement leaves, requiring that a greater amount of attention be devoted to these types of personnel services activities.

The Department Personnel Officer is involved in counseling employees and supervisors regarding the solving of employees' problems. The role of the Personnel Services Division with respect to employee discipline is currently in a state of flux. In past years discipline was handled through the Investigation Division. Department staff reports that currently the Investigation Division investigates employee discipline problems but refers the cases for action to the Personnel Division. It is felt by some employees that gradually investigation of disciplinary problems will be totally transferred from the Investigations Division to the Administrative Services Division. The Department should resolve the uncertainty about the handling of employee discipline by making a definitive placement of responsibilities rather than leaving it to evolve to a certain status by default. (See Recommendation No. 20.)





## COMMISSION

The Board of Building and Safety Commissioners, although not the head of the Department, by Charter and Municipal Code provisions plays a larger role in the activities of the Department than do many other "advisory" commissions to departments. The Commission has established a five-member Board of Examiners known as the Housing Advisory and Appeal Board (HAAB). That Board is intended to serve in an advisory capacity to the Commission, conduct any investigation directed by the Commission, and consider all appeals and protests concerning housing and all matters referred to it by the Commission. In practice, the HAAB hears all appeals about Department decisions, and makes recommendations to the Commission.

The Superintendent of Building has authority to grant slight deviations from the codes. Deviations not granted by the Superintendent of Building which are appealed to the Commission, are first heard by the HAAB. A review of the minutes of the HAAB has indicated that over eighty percent of the cases on which the Department staff report recommends denial, the HAAB recommends approval. The Commission, in turn, approves most of the HAAB recommended approvals. In recent years the Department has analyzed the kinds of appeals approved by the Commission, and has reduced the number of those appeals by arranging for approval of various minor deviations to be granted by the Superintendent of Building. This process should continue, in order to simplify the procedures for the appellant and to reduce the workload of the HAAB, Commission and Department as a whole. (See Recommendation No. 16a.)

In attendance at Commission or HAAB meetings are the Superintendent of Building or his representative, the engineer assigned to present the Department's findings, and the appellants and their representatives. The Superintendent of Building rarely participates in the discussions at HAAB or Commission meetings. The Superintendent of Building has assigned an employee of the Department to act as Secretary to the Commission. The employee so assigned also acts as Secretary to the HAAB. The Secretary function is currently performed by a Senior Structural Engineering Associate. His time, plus the time of seven clerical positions, is fully occupied by the Secretary duties. He attends all meetings of the Commission and the HAAB, usually accompanied by a stenographer.

During the meeting the Secretary often participates in the discussion, offering technical advice and clarification of Code and engineering matters, and reporting on the results of



correspondence and other communications pertinent to the issues being discussed. The Commission Secretary is viewed as a liaison between the lay boards and technical staff. Together, the Boards and the Secretary are viewed as serving in a public defender type role, and as a means to provide Code knowledge to the public.

During the course of the audit, Department staff indicated that the involvement of the Secretary in Commission activities has increased, due to increasing requests for services from the Commission. His duties have become more involved and technical in nature than they had been under previous Commissions. The Secretary is often requested to investigate issues and report back as an independent agent from the Department. Although these investigative services perhaps provide helpful information to the Commission, they are not necessarily essential to its operations or to the Department's operations, and in the interest of economy may be reduced. The essential functions of Secretary to the Building and Safety Commission can and should be performed by a person without an engineering background, at a much reduced cost. (See Recommendation No. 16c.) The active role of the Secretary in the Commission discussions about code and engineering matters can and should be replaced by a more active participation by the Superintendent of Building or his representative. His expertise, if utilized by the Commission should more than compensate for any diminution of expertise in the Secretary position. Requests for investigative research, if directed to the Department staff, rather than the Secretary, could then be assigned to the employees most familiar with the issues, and thus able to provide a response to the Commission in the most efficient manner. (See Recommendation No. 16b.)

Further improvements to utilization of the Commission secretarial staff may be achieved by revising the method of preparing the Commission and HAAB agendas and minutes. The Secretary is usually accompanied at all meetings by a stenographer. Although the Secretary takes notes during the proceedings, the stenographer, from shorthand notes, usually produces the first draft of the minutes. After substantial revision by the Commission Secretary, a second draft of the minutes is prepared for the Commission President, who further revises them. From this last revision, the third and final version of the minutes is typed and later bound into books. Although the initial preparation of the minutes by the stenographer may save the Secretary some time, it utilizes more staff time as a whole, by involving two persons, rather than just one, during the entire Commission meeting. Further, substantial retyping of the Commission minutes usually occurs because the stenographer does not always perceive a Commission action in the same way as the Commission Secretary. Attendance of a





stenographer at Commission meetings should be discontinued, and the minutes should be dictated by the Commission Secretary and typed by staff. (See Recommendation No. 16d.)

The format of the minutes and the agendas should be revised so that each agenda item is followed by a space sufficiently large to later type a short narrative statement of the HAAB or Commission action on the item. The agenda would then become the minutes of the meeting. This procedure, utilized by the Personnel Department in the preparation of Civil Service Commission agendas and minutes, substantially reduces the amount of staff time both in composition and retyping of Commission minutes. (See Recommendation No. 16e.)

The Commission secretarial staff has available to it an automated typing (IBM mag-card) machine which was installed with the intention of facilitating production of the minutes and standardized correspondence. Problems of allocating personnel to operate the machine have resulted in underutilization. Effective operation is further hampered by the magnitude of the revisions to minutes as originally prepared by the stenographer. This situation could be at least partially corrected by the Commission Secretary dictating the minutes into a dictating machine. The resultant draft (which could be prepared by a clerk typist) should require far fewer significant corrections, since they would already reflect the viewpoint of the Commission Secretary. Further improvement of machine utilization would require that only one clerk typist (with one back-up) be assigned to utilize the machine. Supervisory staff should program work to be assigned to that individual such that the benefits of that machine could be most fully realized. (See Recommendation No. 16f.)



## AFFIRMATIVE ACTION

The Building and Safety Department has set realistic affirmative action goals, and is making adequate progress in achieving them. Most Department employees are in the Skilled/Craft, Office/Clerical, or Professional occupational categories. There is significant under-representation of minorities and women in the Professional and Skilled/Craft categories. This has been due to the low availability of qualified women and minorities in these specialized fields. The Personnel Department has completed an audit of the Building and Safety Department Affirmative Action Program. A draft of the Personnel Department report identifies impediments to hiring of minorities and women in the various job categories, and proposes methods to strengthen the Affirmative Action Program in the Building and Safety Department. The Personnel Department is awaiting formal response from the Building and Safety Department.

The Officials/Administrators category is under-represented in all minorities and women. A significant impediment to broadening the base from which appointments to these job categories are made is the requirement that employees be registered Professional Engineers with the California State Board of Registration for Professional Engineers. Additionally, some positions require registration with authority to use the title "Structural Engineer". A possible resolution to barriers of this type would be elimination of the professional engineer and structural engineer requirement for some of the management positions in the Building and Safety Department. Adjustments to requirements, together with the implementation of the new Inspection Bureau, would broaden the base of employees eligible to promote to these managerial positions.

The Professional category is composed primarily of engineering jobs which require a college degree in engineering or an Engineer-In-Training Certificate. The engineering series is under-represented in all minorities (except Asian) and women. A possible solution to this condition would be the implementation of student engineer programs to recruit women and minorities.

The largest job category in the Department is the Skilled/Craft category. Women and all minority groups are under-represented in this category. The primary reason for this under-representation is that most of the incumbents have come from the construction industry which has traditionally had a very low percentage of women and minorities. The Assistant Inspector Program is a viable means of bringing women and minorities into the inspector classes; however, the scoring on the open



examination for these positions tends to hinder the appointment of women because of military credits. Solutions proposed by the Personnel Department include the establishment of a Shop and Craft Trainee position from which employees could promote to Assistant Inspector, and the establishment of a four-year degree program in the field of inspection.

The City Affirmative Action Program requires that supervisors hold meetings with employees regarding affirmative action matters. The Personnel Department survey reports that information regarding affirmative action has not been thoroughly disseminated to all employees through their supervisors. Since affirmative action requires not only a change in the employment practices but also changes in employee attitudes, dissemination of information regarding affirmative action is an important part of the entire program. The Department should provide information regarding affirmative action to employees at all levels through regular department staff meetings.





## APPENDIX



Date: January 23, 1979 S79.409. .

To: C. Erwin Piper, City Administrative Officer  
Room 300, City Hall East

From: Jack M. Fratt, General Manager  
Department of Building and Safety

Subject: MANAGEMENT AUDIT OF BUILDING AND SAFETY

The final draft of the Management Audit Report prepared by your staff has been reviewed by the Management staff of the Department of Building and Safety. The time constraints involved necessitate that this be only a general expression of my grave concern relating to recommendations #1 and #10 contained in the report. This submittal is not intended as a detailed or complete response to any part of the Management Audit Report.

Since Department Management was not adequately consulted for their input during the audit process, I am taking advantage of your offer and submitting my most serious concerns for inclusion with the report. It would have been preferable to have the Management Audit include consultation with me and the Department Management staff during the audit process, and before the conclusions and recommendations were firmed up and drafted into final form. This might have prevented the inclusion of what I believe to be inappropriate recommendations such as are contained in recommendations #1 and #10 of the report.

This audit was made during my first year as General Manager of the Department of Building and Safety. The Management Staff and I have been most anxious to investigate new procedures and possible organizational changes with the goal of developing a more efficient, more service-oriented and more responsive department. This Management Audit could have been an invaluable tool in attaining this goal if the Audit Team had considered it as a cooperative effort with the Department. I am sorry this opportunity was missed but believe beneficial changes will result from the audit.

The Department can develop constructive and useful procedures or alternate proposals for implementing the goals of most of the recommendations. Recommendations #1 and #10, however, contain major reorganizational proposals which I believe would increase the cost of construction and produce results detrimental to the activities of the Department and the welfare of the citizens of the City of Los Angeles.

After a review of the recommendations and after consultation with members of my staff I wish to make the following points concerning recommendations #1 and #10. These observations are general in nature and apply to both recommendations since they are so closely interrelated. All comments may not apply equally to all points contained in the two recommendations:





A. PRIMARY DEPARTMENT FUNCTIONS

The Audit Team's Basic Premise as stated in their report is that the three major functions of the Department are Engineering, Inspection and Conservation. The majority of their investigation then follows this unfortunately erroneous premise and ends with a recommendation that the Department be reorganized to fit this original assumption:

The true primary functions of the Department which cannot be ignored in the organizational structure are:

1. Enforcing regulations of building construction and materials of construction;
2. Enforcing regulations of all grading work on private property;
3. Providing a program for the maintenance and rehabilitation of existing buildings.

B. ORGANIZATIONAL "COMPARTMENTATION"

The most significant stated goal of the Audit Team is to reduce "compartmentation" in the Department. They propose to do this by separating the activities of Engineering Plan Check and Construction Inspection and placing them in separate bureaus. This reorganization would result in a rigid segregation into two highly specialized bureaus which would provide more "compartmentation" than the present organization.

C. SERVICE TO THE PUBLIC IS PARAMOUNT

The Department of Building and Safety is totally a service organization, yet an analysis of the organization of the Department was made without sufficient consideration of either the needs or desires of those served. A "textbook" approach was used and a "textbook" conclusion reached which is unresponsive to the Department's role of service to the public.

D. COST OF REORGANIZATION

The reorganization proposed would have a tremendous first cost in personnel training and physical plant alterations with no planned or foreseeable future savings in operating costs. No determination or study as to the cost effectiveness of the proposal was made.



E. INCREASE IN "TOTAL COST" OF CONSTRUCTION

The "total cost" to the public of the Department's services and operation would be increased by the proposal. "Total cost" includes the increased cost of construction which results from Departmental delays, errors, non-uniformity of interpretations and lack of technical competence of employees. These are real and significant costs which the Department has worked diligently to reduce but which the Audit Team did not recognize.

F. ADVANTAGES OF CURRENT ORGANIZATION

The report ignores the Department's current reputation for competence, impeccable honesty, innovative new programs and changes, technical excellence and code leadership. It also ignores what is required to maintain such a status and the advantages and cost benefits the community gains from this status. The proposed reorganization of the Department presents only one solution to a complex organizational problem.

G. EXPANSION OF CLASS DUTIES

The expansion of the Building-Mechanical Inspector class to provide for a single inspector to handle nearly all inspection in a district, as well as complaint enforcement, does not take into account the knowledge and degree of expertise required to enforce each of the Department's codes nor the special talents and training needed for complaint enforcement.

The recruitment of individuals with sufficient training and knowledge or the training of individuals to provide the wide range of knowledge required would not be possible. If a training program were attempted, the training time required and the resultant cost to the City would be prohibitive. In addition, the results of a training program would be unsatisfactory. Even under the present Building-Mechanical Inspection Program, the Audit Team indicated that these inspectors need considerable additional training.

The Department plans a gradual and limited expansion of the Building-Mechanical Inspection Program but not to the extent recommended in the report.

In summary, I believe that the reorganization proposal, as envisioned in audit recommendations #1 and #10, represents a perilous and highly experimental "textbook" concept which fails to present any monetary savings or reflect industry or public needs. The implementation of these recommendations would create an expense in dollars, in time and public service which would be totally contrary to post Proposition 13 philosophy.



The Department's current improvement plans, with their obvious actual benefits, should receive the full continuing attention of the Department rather than abandoning or reducing these efforts to concentrate on a reorganization plan which fails to recognize the highly successful, competent and honest record this Department has maintained over the years in its service to the public.

A more detailed discussion of the above listed points follows.

#### PRIMARY DEPARTMENT FUNCTIONS

The basic premise on which the Audit Team based their recommendations for reorganization is questionable. In the first paragraph of the Introduction, the report states, "The Audit Team concentrated on the functional areas of engineering, inspection, conservation and support service function . . .". The Audit Team's perception of the Department as having three main functions of engineering, inspection, and conservation apparently had a great influence on their conclusions as their major recommendations are to reorganize the Department to fit this erroneous concept with which they started.

The three basic functions of the Department, which must be kept paramount in any consideration of organization or operation, are actually:

1. Enforcing regulations of building construction and materials of construction;
2. Enforcing regulations of all grading work on private property;
3. Providing a program for the maintenance and rehabilitation of existing buildings.

Inefficiencies can result if these functions are broken down as proposed in the Audit Report.

The checking of a plan for a building and the inspection of the construction of the building are not functions of the Department, but rather, each is a tool used to carry out the single function of assuring a safe and conforming building.

The policy of Department Management has long been to study and develop changes which will bring about a more unified and coordinated operation of the engineering and inspection activities. A move in the opposite direction as recommended by the Audit Team in their proposal for two separate bureaus would be a disservice to the employees of the Department and the public served with no predictable savings in cost of operations.





Over the years, the Department has found it advantageous to structure its organization to best serve the building community in a practical, expeditious and knowledgeable manner. The present organization of the Department is, as stated in the report, somewhat structured along traditional craft lines. This organizational structure has been intentionally developed to coincide with those of professional organizations, labor unions, building material organizations and national and local code groups. This present organizational structure is the Department's strength rather than its weakness as intimated by the Management Audit and is designed to serve both the individual homeowner and members of the construction industry. This allows most contractors and subcontractors to deal with a single division or bureau throughout the entire construction process from permit application to final inspection.

Members of the construction industry have worked with the Department in developing rules and regulations in the interest of safety. This relationship has insured high quality construction in Los Angeles and furthered the confidence and trust of the public in the Department of Building and Safety. Segmenting such a complete service structure by what the Audit Team terms "functional reorganization" is detrimental to the construction industry and will, in fact, result in greater "compartmentation" in the real function of the Department.

#### ORGANIZATIONAL "COMPARTMENTATION"

The proposed reorganization to reduce "compartmentation" in reality substitutes "operational compartmentation" for the "service directed compartmentation" presently existing in the organization of the Building and Mechanical Bureaus. Most inspection is proposed to be in a single bureau and all engineering to be in another bureau EXCEPT that the Conservation Bureau is generally to remain in its present organizational form and Grading Engineering and Inspection is to remain as presently organized. Such reorganization which does not reduce "compartmentation" appears to be based upon an experimental concept since cost benefits have not been substantiated.

The proposed reorganized bureaus would have several serious disadvantages which unfortunately have not been considered by the Audit Team. Namely, the resulting size of the various bureaus will be totally disproportionate but, more importantly, the "operational compartmentation" proposal increases the potential and opportunity for dishonesty on the part of employees.



The present organization inherently has a checks and balance system between office and field personnel and between engineers and inspectors which minimizes these opportunities.

SERVICE TO THE PUBLIC IS PARAMOUNT

A serious consideration of any proposed widespread reorganization should be the needs and desires of those served. This appears to be lacking in the Audit Team's proposal. While the public, the construction industry, elected officials and affected groups are visibly pushing for cost reductions and service improvements in areas such as better permit and informational services to homeowners, computerized record systems, faster turn around time on plan checks and inspections and more uniformity in codes, the Audit Team's recommendation fails to even reasonably recognize the on-going efforts of the Department in accomplishing these desired worthwhile goals.

The Audit Team proposes launching a costly, time consuming, and no-substantial-benefit reorganization of the entire Department. Even if the reorganization purported to yield something other than a "textbook" exercise it could not reasonably be accomplished in the limited post-Proposition 13 era without sacrificing work on the more desirable improvements currently underway to serve the needs of the public and industry.

Our current organization is the outgrowth of continuing public and industry interaction and cooperation over many years and is geared to serve the many-faceted public and industry disciplines. The variety of these needs, which are currently being individually served by the Department in an honest, competent, check and balance manner to the basic satisfaction of those individuals and groups, should by no means be so abruptly and summarily upset without tangible benefits. Such benefits or substantial public input are undocumented in the Audit Report.

The facts are that there is no ground swell of public or industry demand for the reorganization plan which the Audit Team proposes. What is more probable is serious reaction against such changes when the public and industry learn how the procedures and organization they played a continuing part in developing are being changed on a unilateral basis without their involvement. Representatives of the Department attend many meetings with the public and industry during each year and have an extremely high contact rate with them individually. This day-to-day input, which has evolved the current organization, should certainly be given greater weight than the limited contact with industry and the public by the Audit Team.





Department representatives find that the public and members of the construction industry more frequently use this Department as an excellent model which should be emulated by other building departments. Examples are often cited of the progressive and constructive improvements being made on a continuing basis by this Department to provide more effective and efficient service. This on-going record of service to the public should not be diverted in order to perform an unsubstantiated "textbook" exercise in reorganization.

#### COST OF REORGANIZATION

The reorganization proposed would have a tremendous first cost as a result of personnel training and physical plant alterations with no planned or foreseeable future savings in operating costs.

Presently, the Building-Mechanical Inspector needs to be familiar with only a small portion of the Building, Zoning, Electrical, Plumbing and Heating Codes. The proposed reorganization would require the Building-Mechanical Inspectors to have a complete knowledge of each of these Codes plus a knowledge of the State Codes relating to special occupancies such as those regulated by Titles 8, 17, 19, and 24. Extensive training time would initially be required to impart the bare minimum of this information to the present Building-Mechanical or Specialist Inspectors. This would then have to be followed by continuing training requiring additional training personnel. It is questionable if full competency could ever be gained.

Additional personnel would be required to handle the routine inspections during the extensive training period. In addition, a large percentage of the present supervisors' time would be needed for the new training programs. Even if the funds were available, there is no ready source of personnel to fill either of these voids.

The fourth floor of the City Hall would have to be completely rearranged and modified to regroup the functions. In addition, similar changes would be necessary in the District and Branch Offices. This would involve items such as:

1. Moving, removing and installing partitions and ceiling.
2. Moving, removing and installing new public counters.
3. Repairing floor, wall and ceiling damage created by alterations.
4. Installing new electrical receptacle outlets and lighting fixtures.
5. Planning, designing and installing new telephone and intercom systems.



### INCREASE IN "TOTAL COST" OF CONSTRUCTION

The Department is a totally service-oriented organization. A vast majority of the services provided by the Department are "special services" provided for a fee, however, the public's paramount concern is the quality of service and not the fee. Any delays in providing this service or any error on the part of a Department employee can result in costs to the public many times greater than the fees charged. The Department has constantly attempted to tailor its organization and operations to the needs of the public on a "total cost" basis.

The importance of indirect costs as a portion of "total cost" to the public is attested to by the recommendations of many construction industry associations and several ad-hoc committees established to recommend improvements in the operation of the Department. These recommendations have always related to improvement in services provided by the Department and increasing the responsiveness of the Department. Any mention of fees is limited to maintaining equity of charges and limiting of fees to the cost of the services rendered.

The establishment of separate bureaus for engineering and inspection would greatly inhibit the present communications, coordination and cooperation by the members of these separate groups. Under the present organization, each of the Department's service bureaus; Building, Conservation, Mechanical and Research, has its own engineering and inspection staffs. This permits the public to deal, in most cases, with only one bureau and does not subject them to the inherent problems of the inter-bureau communications. When a problem occurs in the field, the present relationship of the engineering and inspection staff permits an expeditious solution to the problem and, as a result, costly delays in construction are minimized. The establishment of separate bureaus for engineering and inspection would create an unneeded and unnecessary barrier to this relationship.

Open, horizontal lines of communication between the engineers and inspectors of the Department are essential to permit each group to learn from and benefit from the experience of the other. In this manner, the technical competence of each group is greatly strengthened.





#### ADVANTAGES OF CURRENT ORGANIZATION

The Audit Report almost completely fails to take into account the exceptional record of the Department of Building and Safety. The Department has, throughout the years, maintained a reputation which ranks among the highest in the nation.

In addition to maintaining a high level of engineering and inspection competence, the Department has handled the increasing workloads resulting from proliferating state and local regulations and the current construction boom despite budgetary restrictions on personnel. Further, in recent years the Department has pioneered innovations and programs such as the combined inspection program (which subsequently has been adopted by numerous jurisdictions throughout the nation), the parapet inspection and correction program, the stairshaft enclosure program, numerous structural design innovations and new earthquake resistant design requirements. In addition, significant contributions have been made to the National Electrical and Mechanical Code.

The professions, the construction industry and community organizations recognize that the Department has provided effective enforcement of zoning and building regulations with an outstanding record of honesty and integrity. This has been made possible by the present Departmental structuring which provides checks and balances within the various bureaus. These act as an effective deterrent to unethical or illegal practices aimed at avoiding compliance with regulations governing public health and safety.

The proposed organizational structure provides only one solution as of course does the present organization. The Department believes certain organizational changes may be desirable but that justification for the proposed reorganization plan is basically unsubstantiated by Department, industry or general public input. The current organization should not be discarded in such a major upheaval without justification.

#### EXPANSION OF CLASS DUTY

The Department recognized the need for the expansion of duties of the inspectors in the Building Mechanical activity. Studies are being made on expanding this activity to some apartment house projects and the training of some of these inspectors for the inspection of grading projects. If the Department is fully staffed this limited expansion of duties can be accomplished with a minimum disruption of the Department's present inspection program.





The expansion of the inspection responsibilities of the Building Mechanical Inspectors to include all buildings of wood, masonry or metal construction used for multiple family residential, commercial and general industrial use is totally unrealistic. The need for concentrated and accelerated training of the BMI inspectors to meet the needs of even their present assignment is acknowledged in other Audit Team recommendations. The recommendation of an expanded scope of responsibilities for the Building Mechanical Inspectors fails to recognize the tremendous amount of knowledge and expertise required to be fully competent in the enforcement of all codes as well as being able to handle complaint enforcement in a competent manner. Complaint enforcement in itself requires a whole different approach to inspection and is almost a separate discipline.

The Department is and has been in the process of adopting nationally recognized codes. The adoption of new codes requires inspectors to be fully knowledgeable of both the old and new codes because many jobs, particularly electrical, plumbing, heating and air conditioning and refrigeration, are alterations to existing installations. The inspectors involved in conservation work must most certainly be conversant with all historical regulations inasmuch as the applicable code under which an installation was made is the prevailing regulation.

The extremely wide range of knowledge required of inspectors to carry out the proposed program presents what the Department considers to be an impossible situation. Even if such a program is attempted, the recruiting and training problems are difficult and costly. Individuals with the technical knowledge and background necessary for the Building Mechanical class are not available in sufficient numbers in the job market to fill the Department's present needs. The class of Assistant Inspector was established to provide trained individuals to satisfy this need. Because of the increased technical competence required for the expanded Building Mechanical class the on-the-job and formal training programs for the Assistant Inspector Class would need to be expanded. "The drop-out" rate for the present Assistant Inspector class exceeds 20%. The aptitude required for the expanded Building Mechanical class would result in an increase in this drop-out rate and, as a result, the cost of the Department's inspection program would increase.

The suggested expansion of the Building Mechanical Inspection responsibility, with its need to include such wide areas of expertise that it would be virtually impossible for a large group of inspectors to be fully conversant, is indicative of the lack of understanding of the Audit Team of construction work and code enforcement.





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The following is a list of the names of the persons who have been admitted to the office of the Secretary of the Board of Education, during the year ending June 30, 1900. The names are given in alphabetical order, and are followed by the date of admission, and the name of the person to whom the office was assigned. The names are given in alphabetical order, and are followed by the date of admission, and the name of the person to whom the office was assigned.

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